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A METHOD OF TREATING CONGENITAL SYPHILIS*

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AND

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NEW YORK

Owing to the manner in which congenital syphilis is conveyed to the fetus, no opportunity is afforded to employ abortive treatment, as in the acquired form of the infection. Practically all the tissues of the body are invaded by the spirochetes long before a way is open for the systematic use of specific remedies. It is, therefore, not difficult to understand why permanent damage may result to the delicate and vulnerable tissues of the fetus and infant during the time that intervenes from the date of infection to the earliest time in which it is possible to combat it.

Although we may be successful in destroying the invading organisms accessible to our remedies, a guarded prognosis as to future integrity of important organs should always be given. The percentage of cases in which the nervous system is implicated in congenital syphilis has not been determined by systematic examination of the spinal fluid. We are gradually accumulating data that may eventually illuminate this problem. In the meantime it may be assumed that the relative number of cases in congenital syphilis will not differ materially from that encountered in the acquired infection. Juvenile paresis, tabes and other types of neurosyphilis due to congenital syphilis are probably caused by early implantation of the spirochetes in the central nervous system. We are confronted with the same problem as in acquired syphilis, namely, the technical difficulty of bringing the specific drugs in contact with the invading organisms before irreparable damage has occurred. By persistent and well considered treatment we may hope to control the majority of cases in which the lesions can be reached by our specific remedies. Congenital neurosyphilis will continue to show the same resistance to drugs given by the usual channels, and will be followed by late degenerations unless better therapeutic methods can be devised than we at present possess.

In this preliminary communication we have purposely avoided the consideration of many problems related to congenital syphilis. We have endeavored to formulate a method of using specific drugs which, by its simplicity of application and results, may justify its further employment by those who have to do with these innocent and unfortunate victims of congenital syphilis.

While it is recognized that the treatment should consist of some form of mercury and arsphenamin, no definite working plan has been formulated for treating secondary syphilis in infants with the precision and regularity employed in adults. Until a few years ago the old-fashioned method of inunction and the internal administration of mercury were almost solely employed. In a certain percentage of fairly well-nourished infants, involution of the cutaneous manifestations took place with improvement in the health and a gain in weight and strength, but there was little or no change in the serology. The infection persisted indefinitely, and as time went on it became more difficult to eradicate. In many of the new-born syphilitic infants with active manifestations, the infection was so great and the physical condition so poor that treatment, no matter how carefully carried out, was of little avail. In a few weeks or months the child succumbed to the disease or to some intercurrent infection. At the present time we do not see so many infants with severe infections or active lesions, because the maternity hospitals are making Wassermann tests on all prospective mothers as a routine measure, and are referring those with positive reactions for treatment. As a result, these women are treated either during the entire period of gestation or some portion of it, thus modifying in a degree the infection in the offspring.

Since the advent of the arsenical preparations, certain physicians have employed them by injection into the longitudinal sinus, the veins of the arm, scalp or neck, or intramuscularly into the gluteal region. While reports show a decided advance over the old methods of treatment, the technical difficulties have been so great that in the hands of the inexperienced more harm than benefit has often resulted. In our work at the Vanderbilt Clinic, therefore, we have undertaken to formulate, first, a method analogous to that employed in adults, i. e., to treat these patients intensively in the secondary stage, endeavoring to obtain a cure as quickly as possible, and, secondly, to make the plan workable and easy of application. The method described below is so simple that the general practitioner even with little technical experience, after he has witnessed the administration, will be able to carry it out with safety.

In the method in question, neo-arsphenamin and mercury are used intramuscularly with a special needle to insure the proper location of the drugs in the gluteal muscles. If the infant is very much under weight with a poor musculature, mercury alone is given at weekly or biweekly intervals until there is an improvement in the general condition, after which the injections of neo-arsphenamin are begun.

The mercurial employed is the mercuric chlorid put up in palmatin in individual collapsible ampules in doses of from 1/10 to 1/8 grain or larger for older

* A preliminary report from the Department of Dermatology and Syphilology, Columbia University College of Physicians and Surgeons.

children. The object in giving a soluble mercury in oil is to favor slow absorption of the drug. In this form it requires about three or four days for absorption. The palmatin, which is in colloidal state, is semi-solid at room temperature and liquefies at 110 F. When ready for use, the syringe being still warm after its removal from the sterilizer, the contents of the ampule are expressed into the barrel, all the air removed, and if the oil has not liquefied from its contact with the hot syringe, the latter with the drug may be immersed for a minute in hot water.

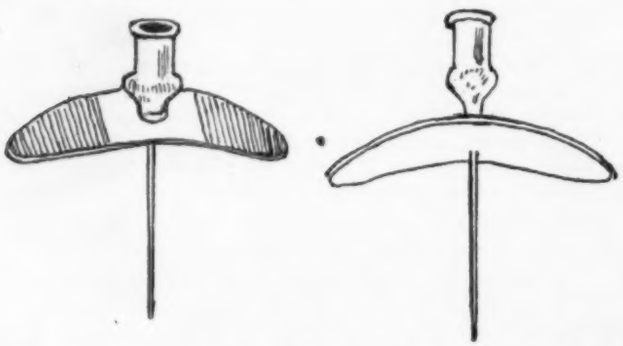

Fig. 1.—Needle for intramuscular injection of neo-arsphenamin and mercury.

An ordinary mercury needle of from 19 to 20 gage, cut down to from one-half to 1 inch in length, is used. After the buttock has been sterilized with iodin, the injection is given into the muscle about 1 inch from the intergluteal fold near its upper angle. The chief pain is that induced by the prick of the needle, as the children as a rule stop crying as soon as the treatment is completed.

In this way we are giving a definite dose of mercury to our patients and need not depend on an unintelligent mother for rubbing in an ointment, the amount of absorption of which varies in every case owing to differences in quality, strength and the length of time the child is rubbed. As compared with aqueous solutions of mercuric chlorid larger doses can be employed with an oily menstruum, absorption is less rapid, and the attendant pain of the injections not so great. The slower absorption permits longer intervals between injections. For the present we are giving from six to eight treatments at weekly intervals, followed by a rest period of from four to six weeks.

The neo-arsphenamin we have had put up in individual glass ampules containing from 0.1 to 0.2 gm. and large enough to hold 5 c.c. of solution, the object being to dissolve the drug in the original container. After the ampule has been immersed in alcohol to insure its proper sealing and sterilization it is dried with sterile gauze, the end broken off, and from 2.5 to 3 c.c. of cool sterile, freshly distilled water injected into it by means of a syringe. We then attach to the latter a Luer mercury needle long enough to reach to the bottom of the ampule and draw the fluid into the barrel, alternately expelling and drawing it up to hasten complete solution.

The complications following the intramuscular injection of neo-arsphenamin, such as abscesses and infiltrations, can be avoided if the drug is injected deep into the muscle. To prevent its leaking into the subcutaneous and adipose tissue, we have devised a special needle from ½ to 1 inch in length (somewhat longer for older children), of 19 to 20 gage, with an oval concave shoulder which fits snugly over the buttock, the shank of the needle being inserted flush with the under surface of the concavity (Fig. 1). This enables one to hold the needle in place, no matter how much the child moves. With the ordinary needle the slightest motion of the child changes its position, and unless the operator watches this carefully he injects the drugs into the subcutaneous and adipose tissue with unpleasant by-effects. After the injection, the needle is rapidly withdrawn and a cotton pledget held firmly over the site for a few minutes. The site of injection is the same as for the mercurial treatment; half of the solution is injected into each buttock previously cleansed with tincture of iodin.

Infants, on the whole, tolerate drugs well; it is surprising what large doses can be administered with safety. The amounts given by us are large when computed according to the weight ratio, but so far no untoward results have arisen, and it may be possible to employ even larger doses. We are now giving neo-arsphenamin in the following doses at weekly intervals: 0.075 gm. for infants from 3 weeks to 8 weeks; 0.1 gm. from 2 to 6 months; 0.15 gm. from 6 months to 1 year; 0.15 to 0.2 gm. from 1 to 2 years. These doses are employed in courses of from six to eight, followed by rest periods of from four to six weeks.

We have at present forty-five babies under treatment, twenty-one of them ranging from 3 weeks to 6 months in age, and the remainder up to 2 years. In no instance have we had any bad results from this method of treatment. In one or two of the very young

Fig. 2 (Case 1).—Appearance of patient with mucous patches and ulcerations about mouth and anus, squamous syphilid on face and body, and marked snuffles.

babies there was a slight infiltration following both the neo-arsphenamin and the mercury, which was absorbed in a few weeks and did not interfere with subsequent treatments. In no instance was there any abscess formation or other complication. All of the patients have shown such marked improvement following the

treatment that we feel justified in publishing this preliminary report.

Mention should be made of the variation in the Wassermann reaction in babies born of syphilitic mothers. The blood taken from the umbilical cord at the time of birth may be strongly positive; ten days later from the longitudinal sinus, jugular vein or veins of the forearm it may give a negative result. While for statistical purposes it is advisable to obtain blood at this time, one cannot place too much reliance on the result. In controlling our cases we make several tests at ten day intervals; and if they continue negative, in the absence of clinical evidence of the disease, we follow the child serologically for a year, lengthening the interval to from four to eight weeks. Careful clinical examination of these infants is also necessary as the blood is sometimes negative in the presence of the clinical infection, or it may fluctuate from negative to positive at different times.

Fig. 3 (Case 1).—Appearance of patient three weeks after treatment.

Below are given the histories of nine infants with the manifestations of a severe syphilitic infection, all of them very ill, and with a poor prognosis. They have all improved up to the time of this report. While we appreciate that it is premature to predict the final outcome, yet we feel that the present plan offers more hope than the old methods. We base this assumption on comparison with our past experience.

REPORT OF CASES

CASE 1.—Barbara F., aged 6 weeks, whose mother and father were serologically positive, was admitted, April 21, 1920, in a very cachetic condition with ulcerations and mucous patches in and around the mouth and anus, and a squamous eruption on the trunk. The palms and soles were desquamating; the child had marked snuffles. The Wassermann test was ++++ with alcoholic antigen, icebox fixation, and negative with cholesterin antigen. The infant weighed 5 pounds, 9 ounces, and presented the typical facies of congenital syphilis of malignant type (Fig. 2). Owing to its poor physical condition we decided to begin the treatment with mercury, and gave the treatment outlined in Table 1.

The response to treatment was immediate, involution of the lesions taking place after the first mercury. The photograph reproduced as Figure 3 was taken three weeks after treatment was begun and shows the improvement over the first one taken on the day of admission. July 8, she weighed 7 pounds, 2 ounces. The gain in weight in this infant has been very slow, owing partly to the severity of the infection, and partly to improper feeding. The Wassermann reaction, July 9, 1920, was negative with all methods.

TABLE 1.—TREATMENT IN CASE 1

4/21/20	Mercuric chlorid	1/10 grain
4/28/20	Mercuric chlorid	1/10 grain
5/ 3/20	Mercuric chlorid	1/10 grain
5/ 7/20	Mercuric chlorid	1/10 grain
5/10/20	Mercuric chlorid	1/10 grain
5/12/20	Neo-arsphenamin	0.05 gm.
5/19/20	Neo-arsphenamin	0.05 gm.
5/24/20	Mercuric chlorid	1/10 grain
5/26/20	Neo-arsphenamin	0.05 gm.
6/ 2/20	Neo-arsphenamin	0.035 gm.
6/16/20	Neo-arsphenamin	0.05 gm.
6/23/20	Neo-arsphenamin	0.05 gm.
7/ 7/20	Mercuric chlorid	1/10 grain
7/14/20	Mercuric chlorid	1/10 grain

CASE 2.—Daniel M., aged 5 months, whose mother and father had strongly positive Wassermann tests, was admitted April 21, 1920, with infiltrated palmar and plantar syphilids (Fig. 4), and with a papular eruption of the groin and thighs. The infant was very anemic and undernourished. The Wassermann test was ++++.

TABLE 2.—TREATMENT IN CASE 2

4/21/20	Mercuric chlorid	1/10 grain
4/28/20	Neo-arsphenamin	0.075 gm.
5/ 3/20	Mercuric chlorid	1/10 grain
5/ 5/20	Neo-arsphenamin	0.075 gm.
5/10/20	Mercuric chlorid	1/10 grain
5/12/20	Neo-arsphenamin	0.075 gm.
5/17/20	Mercuric chlorid	1/10 grain
5/19/20	Neo-arsphenamin	0.075 gm.
6/ 2/20	Neo-arsphenamin	0.075 gm.
6/ 7/20	Mercuric chlorid	1/10 grain
6/ 9/20	Neo-arsphenamin	0.075 gm.
6/16/20	Mercuric chlorid	1/10 grain
6/23/20	Neo-arsphenamin	0.075 gm.

Three weeks after the beginning of treatment there was no further evidence of the lesions. The child is gaining in weight slowly, but steadily. The Wassermann taken June 23, 1920, was still ++++.

CASE 3.—Madeline C., aged 10 months, whose mother and father were serologically positive, presented on admittance, April 21, 1920, an annular, infiltrated syphilitic eruption on the buttocks and thighs (Fig. 5), and eroded papules in the corners of the mouth and about the anus. The infant was very poorly developed.

Fig. 4 (Case 2).—Squamous syphilid of palm.

Treatment from April 21 to June 23 consisted of seven injections of mercuric chlorid, 1/10 grain, and six injections of neo-arsphenamin, 0.075 gm.

By May 17, the infiltrated lesions had entirely involuted, but pigmentation remained. There has been a very marked improvement in the physical condition, the baby now weighing 17 pounds, 10 ounces. The Wassermann test is still ++++.

CASE 4.—Lorraine I., aged 1 month, whose mother and father were serologically positive, was admitted May 5, 1920, from the Sloane Maternity Hospital, with a ++++ Wassermann test from the umbilical cord at birth, and ten days later a strongly positive test from the longitudinal sinus. Physical examination revealed a large liver and spleen, and a pseudoparalysis of the left arm and leg due to an epiphysitis. The weight, May 12, was 4 pounds, 14 ounces.

Treatment from May 12 to July 7 consisted of three injections of mercuric chlorid, 1/10 grain, and one injection of 1/20 grain. Six injections of neo-arsphenamin, 0.035 gm., and two of 0.075 gm. were given.

The liver and spleen are considerably smaller; the child moves its left arm and leg as well as the opposite side, and on June 16, 1920, weighed 6 pounds, 1 ounce. The Wassermann test was unchanged.

Case 5.—Ivy W., aged 6 weeks, whose mother's Wassermann test was strongly positive and whose father would not report for a test, was so ill when admitted, Dec. 31, 1919, that she was referred to Bellevue Hospital. Jan. 17, 1920, the following report was received from the hospital: "Keratitis of both eyes, enlarged liver and spleen, osteoperiostitis of femora, and destruction of upper end of diaphysis of right femur; peeling of soles of feet and clawlike nails; Wassermann test ++++. The baby is receiving mercurial (gray) oil, 0.01 gm., intramuscularly weekly."

March 3, the child returned to us still presenting the foregoing symptoms and weighing 8 pounds, 13 ounces.

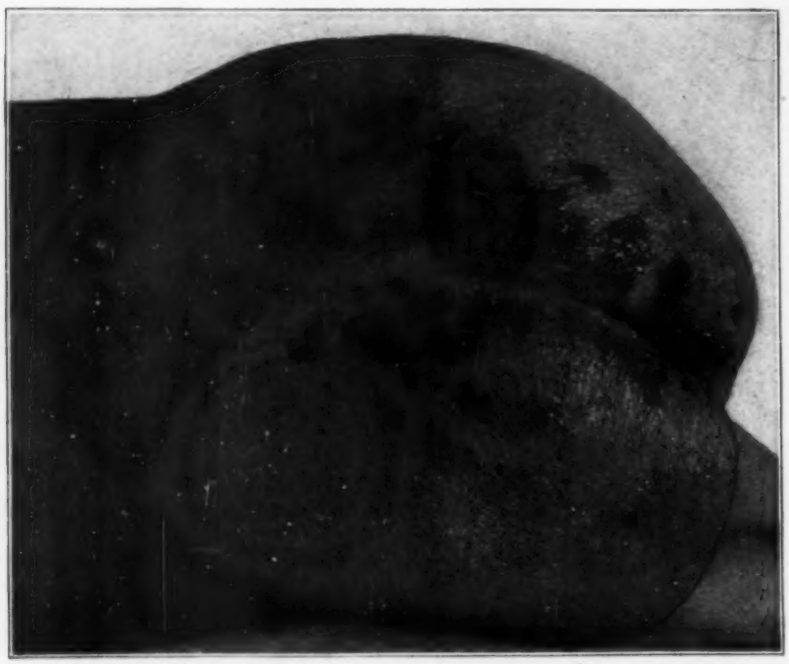

Fig. 5 (Case 3).—Annular infiltrated syphilitic eruption on lower portion of trunk.

Treatment from March 10 to July 2 consisted of six injections of neo-arsphenamin, 0.075 gm., and seven injections of mercuric chlorid, 1/10 grain.

The keratitis has entirely disappeared, the liver and spleen are hardly palpable, the nail condition has improved, and there is no evidence of desquamation of the palms and soles. Up to the time of writing we have been unable to roentgenograph the femora. The child now weighs 16 pounds, 8 ounces. The Wassermann test continues ++++.

Case 6.—James C., aged 3 months, whose mother and father both had a strongly positive blood, the mother having a positive spinal fluid and the father not having been punctured, presented no clinical evidence of syphilis when admitted, Feb. 11, 1920, but its blood was ++++ and spinal fluid ++++ to 0.6 c.c. The weight was 8 pounds.

Treatment from February 18 to May 12 consisted of six injections of neo-arsphenamin, 0.075 gm., and five injections of mercuric chlorid, 1/10 grain. The weight at that time was 15 pounds. The baby then passed from observation, owing to the mother's departure to another city. She promised, however, to return the latter part of the summer to enable us to follow this case further.

Case 7.—Antoinette P., aged 1 month, whose mother and father were serologically positive, was admitted March 30, 1920, with marked snuffles. The weight was 5 pounds 11 ounces; the Wassermann test ++++. The baby had such a poor muscular development that we deferred the injections and gave her calomel by mouth, 1/10 grain three times a day. In the light of further experience we began the treatment intramuscularly at once. On internal medication this baby by April 14 weighed 6 pounds, 8 ounces, but the snuffles persisted. From this date to July 7 she received six neo-arsphenamin injections, from 0.035 to 0.075 gm., and eight injections of mercuric chlorid, 1/10 grain. After the third treatment the snuffles entirely disappeared. July 10, 1920, she weighed 11 pounds, 7 ounces. The Wassermann test, July 14, as negative.

Case 8.—Baron S., aged 6 weeks, whose mother's test was ++++, and father's negative, the mother receiving treatment before the birth of the baby, was admitted March 3, 1920, for a Wassermann test, at which time it was negative; the child weighed 6 pounds, 15 ounces. A month later a second test was negative. May 20, the child presented a mass on the left side of the neck below the angle of the jaw about the size of a hen's egg. We believed this was syphilitic in nature and instituted antisyphilitic therapy.

From May 20 to June 5, five injections of neo-arsphenamin, 0.035 to 0.075 gm., and one injection of mercuric chlorid, 1/10 grain, were given. After the first treatment the mass was smaller, and by June 9 it had entirely involuted. Wassermann examinations, made May 25 and June 16, were still negative. The weight, June 16, was 8 pounds, 11 ounces. Although this case was serologically negative, we believe it was one of active syphilis.

Case 9.—Ernest B., aged 3 months, whose mother and father gave ++++ tests, was admitted, Feb. 8, 1920, with marked snuffles; the weight was 7 pounds, 10 ounces, the Wassermann test ±, one week later +. Because of the doubtful reaction we prescribed mercurial ointment for five weeks. This had no effect on the snuffles. The weight had increased to 9 pounds, 1 ounce.

From April 7 to July, eight injections of mercuric chlorid, 1/10 grain, followed by three of neo-arsphenamin, from 0.075 to 0.1 gm., were given. After the third injection of mercury the snuffles disappeared. July 7, 1920, the child weighed 11 pounds, 11 ounces. The Wassermann test is ±.

The remaining patients all had a strongly positive Wassermann reaction; none of them presented skin or mucous membrane lesions, but they were below normal weight. They are all being treated according to the method outlined. A detailed report will be incorporated in a future communication.

CONCLUSIONS

1. The earlier treatment is begun, the better are the chances of cure.

2. Systematic treatment with soluble mercury in oil and neo-arsphenamin given intramuscularly is so simple and the results are so gratifying that serologic cures may be anticipated within one year of interrupted treatment.

3. The Wassermann test taken at birth in the infant is not to be relied on. Ten days after birth is a better time for accurate interpretation of the serology.

4. A negative Wassermann test in the face of positive clinical manifestations may occur in congenital syphilis; therefore, careful clinical examination is very important, and antisyphilitic treatment may be instituted with negative serology.

5. We hope to publish later a more detailed description of the cases under prolonged treatment together with the serologic results obtained.

DISLOCATIONS OF THE CARPAL SEMILUNAR BONE *

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Of all the dislocations of the carpal bones, the dislocation of the semilunar is the most frequent; and uncomplicated by fracture, they are not so rare as the few references in the past medical literature would intimate. The more extended use of the roentgen ray (still commonly used too late for early diagnosis and successful reduction) has revealed this condition to be a not infrequent cause of persistent disability after previously undiagnosed injury to the wrist joint.

Another unwarranted fallacy is that these dislocations can rarely be reduced and held, and that reduction yields only mediocre functional results and that the immediate excision is preferable. This is true only of late, undiagnosed and neglected cases.

The cause for the more relative frequency of dislocation of the semilunar bones is to be found in the wedgelike shape of its posterior extremity. The dislocation is always anterior and is usually found in male adults. The immediate cause is a fall on the extended hand, or a sharp blow on the back of the wrist joint, as in Case 2.

Such accidents usually give rise to a fracture at the lower end of the radius (Colles' or reverse Colles'—automobile—fractures); but when the radius is more resistant to fracture and when the ligaments of the anterior surface of the carpus are ruptured, torn or slit by the divulsive strain, then the compressive force of the hypertension exerted on the tapering posterior wedge of the semilunar bone causes it to glide forward in its bed between the scaphoid and cuneiform and dislocate through the tear in the anterior carpal ligaments. During the process of dislocation the bone often turns around on its long axis.

The dislocation is sometimes complicated with dislocations of the os magnum and other bones of the wrist joint and sometimes with fractures of the semilunar itself, or fractures of the lower end of the radius, as in Case 3.

The symptoms are pain, tenderness, swelling and disability at the wrist joint. Uncomplicated with Colles' fracture, no silver fork deformity exists, but there is an undue prominence and a palpable tumor on the palmar aspect of the carpus.

The roentgenogram (which should always be used after any severe and painful injury to the wrist joint, or in suspected sprains when the symptoms persist for more than a day or two) reveals the exact diagnosis. Lateral views of the joint are, of course, necessary.

The immediate reduction of the dislocation (uncomplicated by fracture of the semilunar bone) has been so successful in my experience that a description of the manipulations in detail is herewith given. When available, the reduction can well be carried out with the aid of the horizontal fluoroscope.

With the patient completely anesthetized, a Thomas wrench, well padded with thick rubber tubing, or, better, a small size cushion tire, is carefully applied. The proximal blade is placed on the posterior surface of the forearm well away from the wrist joint, and the distal blade is made to impinge on the semilunar bone. The object of the rubber padding is to afford a broader surface on the bone so that it cannot easily slip out from under the blade of the wrench. With a moderate amount of corrective force applied to the handle of the wrench, the hand and carpus are forcibly overextended in order to widen the slit in the anterior ligament and enlarge the space into which the dislocated bone is to be forced (Fig. 2). When the hand is overextended to the utmost degree—and no force that we can use in the operating room will compare with that which was produced by the accident—the wrench handle is forced backward—dorsally

Fig. 1 (Case 1).—Dislocation of carpal semilunar bone: before reduction.

Fig. 2 (Case 1).—First step in reduction: pressure and hyperextension of carpus.

—until the reduction is partially accomplished. At this stage, without letting up on the reducing force of the wrench, the wrist is sharply flexed in order to widen the posterior diameter of the semilunar bed and to exert a wedging force on the palmar aspect of the bone (Fig. 3). If successful, the reduction is now complete and the hand should be put up in plaster of Paris in this hyperflexed position. The cast should not go beyond the knuckles, leaving the fingers free (Fig. 4). If unsuccessful, the process can be repeated, the pressure of the wrench being shifted from side to side or from above downward. By these means the rotation can usually be overcome and the dislocated bone slipped back into its bed.

After a week in plaster in the hyperflexed position, the cast may be removed and a bent metal splint applied (Fig. 5), and the usual massage and exercises begun. The wrist should not be overextended during exercising for several weeks.

When a Colles fracture exists, this can be reduced after the dislocation is overcome, the flexion manipu-

* Read before the Section on Orthopedic Surgery at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

lation and flexed position in the cast being the correct procedures for this condition, too.

When the dislocation cannot be reduced or when the semilunar bone is so badly fractured that it cannot be brought into position, it should be removed by open operation at the earliest opportunity.

I cannot give any estimate of how old the dislocation must be before reduction can be considered impossible. Case 3 was reduced ten days after the first attempt was made to reduce the fracture.

REPORT OF TYPICAL CASES

CASE 1.—*Simple dislocation of semilunar bone after fall on the outstretched hand* (Figs. 1-6).—There were symptoms of pain, tenderness and disability of the wrist joint; there was no silver fork deformity or preternatural mobility of lower end of radius. There was a moderate swelling and a palpable tumor in the palmar aspect of the wrist joint. Diagnosis was confirmed by the roentgen ray. Reduction by a Thomas wrench two hours after the injury was successful. The hand was put up in hyperflexed position in a plaster cast and held for two weeks; some stiffness of the fingers and wrist joint resulted. This disappeared under appropriate physiotherapy.

CASE 2.—A man, aged 32, was struck on the back of the right wrist by an auto crank driven by backfire of an automobile engine. There was immediate pain and disability. A diagnosis of sprained wrist was made by the attending physician and hot baths and massage were instituted. The symptoms did not subside, and on the third day roentgenograms revealed a simple dislocation of the semilunar bone, which was reduced by means of the Thomas wrench; the hand was then placed in plaster in the hyperflexed position and kept there for three weeks on account of the patient's absence from the city. After the cast was taken off, the wrist and finger joints were stiff; the patient refused physiotherapy on account of the pain. Six months later there was almost complete restoration of all motions of the wrist and finger joints.

CASE 3.—A man, aged 38, fell a distance of 16 feet, landing on the outstretched palm. There was immediate pain, and disability with silver fork deformity. A diagnosis of Colles' fracture was made. An attempt was made to reduce the fracture; this did not give a satisfactory looking result and the roentgen ray was used by the attending physician for diagnosis. This revealed a dislocated semilunar bone in addition to the Colles fracture. Attempt at manual reduction was unsuccessful. The patient was seen by me ten days later and under gas anesthesia the dislocation of the semilunar bone was successfully reduced by means of the Thomas wrench; the deformity of the Colles fracture was overcome and the wrist placed in hyperflexed position. After a week the cast was removed and a removable metal splint applied; within six weeks the patient could resume his former occupation.

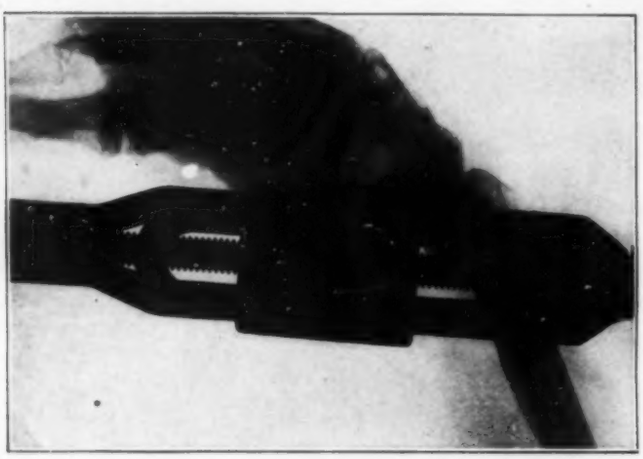

Fig. 3 (Case 1).—Second step in reduction: pressure and extreme flexion.

CASE 4.—A man, aged 45, fell from a scaffold a distance of sixteen feet, landing on both palms with immediate pain and disability in both wrist joints. A diagnosis of bilateral Colles' fracture was made and the "fractures" were set under ether anesthesia. Pistol splints were applied, and after six weeks the splints were removed and massage and passive motion begun. The left wrist made a complete and uninterrupted recovery. The disability of the right wrist persisted, and it was then noted that there was an extra fulness or hard tumor to be palpated over the anterior aspect of the wrist joint. Little was thought of this phenomenon by the attending surgeon, and about three months after the injury roentgenograms revealed the true condition, a simple dislocation of the semilunar bone of the right wrist. After operative removal of the bone, no attempt having been made at reduction, the patient soon regained satisfactory use of the wrist joint and was lost from observation.

Fig. 4 (Case 1).—Fixation in plaster cast in extreme flexion.

CASE 5.—Since writing the foregoing, another typical case has come under my observation. A man, aged 32, fell a distance of 16 feet, landing on his hands. There resulted a fracture of the right magnum and scaphoid. On the left there existed a dislocation of the semilunar bone. Reduction of the dislocation was not accomplished during the "first aid," although an anesthetic was given. On the third day the right hand was almost free from pain, but the pain in the left hand was excruciating. Under deep anesthesia the dislocation of the left semilunar was easily accomplished and the hand put up in plaster in the flexed position.

SUMMARY

1. Dislocations of the carpal semilunar bone are not infrequent, and uncomplicated cases can usually be reduced if treated reasonably early.

2. More frequent use should be made of the roentgen ray in diagnosing injuries about the wrist joint. "Sprains" as well as outspoken fractures should be confirmed by this means.

3. Early cases should have attempts made at a bloodless reduction of the dislocation by means of overextension and the Thomas wrench under complete anesthesia.

4. The reduced semilunar bone should be held in place by fixation in extreme flexion.

5. Physiotherapy should be used early and persisted in until function is restored.

6. Old, intractable dislocations or severe fracture dislocations should be exercised.

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ABSTRACT OF DISCUSSION

DR. EDWARD S. HATCH, New Orleans: Any one who makes a roentgen-ray examination in a case of injury of the wrist could not miss such a fracture. I have seen many cases in which this was not done and the patient was treated for strain, etc. The correct diagnosis was never made.

DR. T. TURNER THOMAS, Philadelphia: Dr. Stern is right as to the causal mechanism of this condition, particularly as regards the part played by falling on the hand. He is also right when it comes to the reduction of the dislocation because he takes advantage of the mechanism of its production. For some years I have entertained a similar conception concerning the causal mechanism in those cases where there was dislocation of the semilunar, plus fracture of the scaphoid and that reduction could be effected under ether by reversing the fracturing force. Acting on that theory, I attempted reduction in one case under ether, and the next day roentgen-ray examination showed that the dislocation had not been reduced. The following day another surgeon, Dr. George Lane of the University of Pennsylvania, undertook to reduce it, then fixed it with a splint and bandages, and the next day roentgen-ray examination showed that it had been reduced perfectly.

Fig. 5 (Case 1).—Fixation in flexion with removable splint following plaster cast.

Fig. 6 (Case 1).—Condition after reduction.

DR. DEFOREST P. WILLARD, Philadelphia: Dr. Stern's paper treats of a condition which I supposed was rather rare. During the past winter I saw three cases quite close together. The roentgenologist told me that during the year he had seen a dozen cases of dislocation of the carpal semilunar bone. Two of my cases presented fracture of the bone as well as dislocation. The man who had a simple dislocation was first treated for sprain of the wrist, although the semilunar dislocation was showing plainly in the roentgenogram, and the tumor to which Dr. Stern has referred being very prominent. Ten weeks had elapsed before I saw him. I did not try Dr. Stern's method. The bone itself was perfect, but the cavity into which it should have fitted was entirely filled and it was absolutely impossible to reduce this perfectly normal looking semilunar bone even at the time of operation. I took it out, and almost immediately a severe median neuritis came on. Whether we started it by manipulating the part too soon I do not know, but after the long disability I thought we should manipulate it in order to induce motion of the tendons of the wrist. I believe the sooner manipulation is started, in spite of the danger of neuritis, the safer for the mobility of the hand.

DR. MELVIN S. HENDERSON, Rochester, Minn.: These cases are rather uncommon, and we usually get them too late. I have seen two cases in which the median nerve was pressed on by the displaced semilunar. There is to be noted a considerable loss of function of the hand in the inability to flex and extend the fingers. This is due to the increase in the thickness of the wrist; the tendons are put on tension. Removal of the displaced bone or its reduction when possible relieves this.

DR. WALTER G. STERN, Cleveland: I cannot say how long after dislocation has taken place one can consider the bloodless reduction of such a dislocation impossible, possibly ten days; but I believe that in the future I should try this method in the older cases before taking out the semilunar bone, for it can do no harm. The removal of the semilunar bone does not interfere with the function of the wrist joint. It is the long atrophy due to the tying down of the tendons that gives bad function in these neglected cases. As to the irritation of the median nerve, I have not experienced this complication; but it does seem that the tumor in front of the joint pressing on the vessels and nerves located anteriorly was the cause of the irritation of the median nerve in the case mentioned.

SURGICAL TREATMENT OF CHRONIC MAXILLARY SINUSITIS OF ORAL ORIGIN *

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NEW YORK

On account of the great developments made during the last few years in oral roentgenography, and the frequency with which roentgenograms of the teeth and maxillae are made, maxillary sinusitis of oral origin is found to be a very common disease. For many years, rhinologists have felt that the maxillary sinus was surely their domain, as they have thought in the past that anywhere from 70 to 90 per cent. of all maxillary sinus infections were descending infections from the frontal or ethmoid or from the nose itself. I believe that the majority of the rhinologists today feel that there are more ascending infections from the mouth infecting the antrum than were formerly recognized, but that still the larger percentage of infections of the maxillary sinus come from above downward.

Most of my oral surgery friends, I think, feel that the percentage of antral infection of oral and nasal origin is much nearer 50-50. We, of course might say that the oral surgeon sees more of these cases originating from the mouth, and that the rhinologist sees more springing from the nasal accessory sinuses. In these days when so many patients are having their teeth roentgenographed as a matter of routine whether they are in trouble or not, latent antral infections are found, and many teeth are removed whose alveoli enter the antrum on gentle curettage. On the removal of many of these teeth, it is found that there is a chronic low grade infection present in the antrum that has been

* Read before the Section on Stomatology at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

draining comfortably through the middle meatus for months. This mild infection has taken care of itself very nicely, and the condition has never become acute. We are today giving a great amount of thought to the peridental structures, to the maxillae and also to the mandible. We are ever on the lookout for bone cysts, neoplasms, necrosis and infected areas, etc. Few teeth

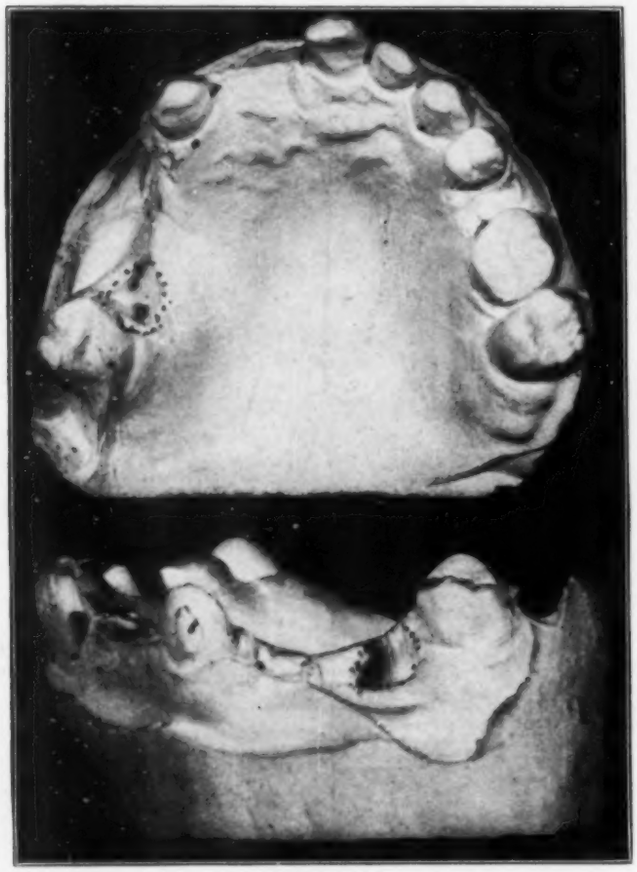

Fig. 1.—Models of superior maxillae with openings in alveolar process communicating with antrum. These were closed by flap operation.

today are extracted by the careful practitioner without being roentgenographed first. The condition of the bone is known and the bone is often curetted and rongeured *even though the antrum is opened.*

I have had many cases during the last year in the hospitals and in private practice in which I have had to make a wound in the maxillae that has caused the mouth to communicate freely with the antrum. In many cases, the antrum has been found to be infected.

When the operator has by force of circumstances made a good sized oral opening into the antrum, and has found the antrum diseased, there are two main factors in the subsequent treatment which should appeal to him. These are: (1) cure of the antral disease as soon as possible, and (2) closure of the communication between the mouth and antrum at an early date.

If we study the physiologic function of the maxillary sinus, and also its anatomy, we find that the antrum was intended to communicate normally with a comparatively clean cavity, the nose; that the nose and the antrum are lined with the same membrane, and that about the same bacteria are found in these two cavities, the nasal and the maxillary sinus. It is evident to the casual observer that nature never intended the mouth and the antrum to communicate, and never intended the mixing of their different bacteria and secretions.

It has been proved clinically that a permanent opening from the mouth into the antrum may produce an ascending infection into the maxillary sinus, later causing a pansinusitis; yet how often do we see the antrum, in these chronic infections of oral origin, irrigated for weeks through the opening in the mouth and packed with gauze? Why should a large oral opening into the antrum be permitted to exist? The mechanics of this treatment is wrong. It is analogous to the housemaid's sending her sweepings from the cellar through the parlor with its dainty hangings rather than sending the dust from the parlor, a comparatively clean room, through the cellar, generally not too clean, to the back yard. A gauze drain inserted into the antrum from the mouth often draws up secretions from the mouth by capillary attraction as does a wick in a lamp, and frequently reinfects the cavity one is trying to cleanse. Up to a few years ago, textbooks were advocating the extraction of a tooth through which to treat a maxillary sinus infection. These books did not stipulate the removal of a diseased tooth that was causing the antral infection, but often a healthy one for drainage purposes only. The sacrifice of a healthy tooth in the old days meant nothing, and the establishment of the communication between two cavities containing different secretions and bacteria was approved of. This method, known as Cowper's, is not advocated now by many authors, although it is often mentioned.

The etiology of maxillary infections in the past has not been carefully considered. Not a month ago, a well-known rhinologist sent me a case of maxillary sinusitis for which he had just performed a radical antral operation. I was told that there was "a sort of 'gum boil' over the second bicuspid," and was asked to treat it. My roentgenographic films disclosed a decided shadow extending to the antral boundary over the second bicuspid, which was a nonvital tooth. Under procain I removed the tooth, and the curet entered the sinus very readily. On exploring the so-called "gum boil" above the tooth, I found it led to necrotic bone. Most of the alveolus of the offending tooth was removed, and an area of dead bone as large

Fig. 2.—Model of superior maxilla with opening in alveolar process communicating with antrum.

as a penny was removed from the anterior wall of the antrum after a flap of the soft tissues had been turned back. I do not believe that this case was properly diagnosed in the beginning before the first operation. There was some diseased membrane over the end of the infected bicuspid, and I am quite sure that the antral infection would not have cleared up in many months, if ever, without some surgical treatments

being given to the infection of the alveolar process. The type of infection should be diagnosed early, before treatment is begun, and this cannot be done accurately without taking oral roentgenograms in conjunction with the anteroposterior plates showing the sinuses. If the infection is a descending one from the frontal or ethmoid sinuses, the case naturally belongs to the

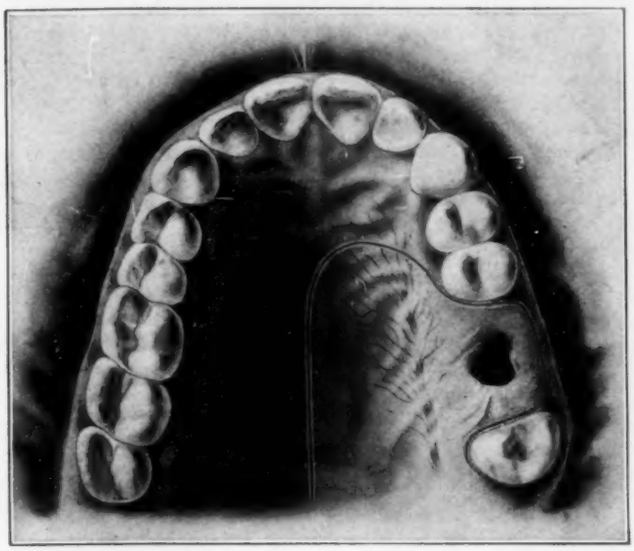

Fig. 3.—Outline of flap and also posterior palatine artery which supplies flap well with blood.

rhinologist, and in some cases to the oral surgeon, if he is familiar with these sinuses. If the infection is an ascending affair from the maxillary bones and teeth, it *cannot* be cured alone by the rhinologist unless he is familiar with the mouth and dental structures. In either of the foregoing cases, the cause of the infection must be removed; and if the case is a chronic one, the antrum must be cleaned by a gentle curettage and some times by removing the lining membrane and must be irrigated, and drained properly. In nearly all of these cases, the sinus should be irrigated with warm saline through an opening under the inferior turbinate, and if the infection is of oral origin, the washings drain downward into the mouth. If the case is not of oral origin and there is no opening into the mouth, of course the washings naturally return to the nose and are discharged through that cavity. I do not see why the mouth opening in the oral cases should be packed in any case more than a few days, even if the suppuration has not ceased and although the tissues around the oral opening are not in sufficiently healthy condition to bear sutures. In many cases, it is advisable to close mechanically the oral opening for a time on account of the suppuration. In these cases, the mouth and the maxillary sinus should be separated by a well fitting "saddle-plate" that does not press at all on the edges of the wound leading into the antrum. No plug or projection that enters the opening should ever be used. I cannot condemn too severely the use of any appliance that tends to establish a permanent opening between these two cavities. This plate is best made of rubber, and covers over the labial and palatal surfaces of the alveolar process, and is generally held by clasps. Of course, this is a temporary affair, and is to be worn only until the suppuration has subsided and the plastic repair of the opening can be accomplished. This plate, in a way, acts as the valves of the heart. It allows of drainage from the antrum downward with gravity under the plate into the mouth, but prevents the seepage upward of the oral secretions into the maxillary sinus. These plates, if constructed properly, never block the drainage, and keep the antrum cleaner than any gauze drain can possibly keep it.

In searching the literature, we find little mention of any operative procedure for closing off an opening from the mouth into the maxillary sinus. Little attention has been given to the fact that the mouth and the antrum are two very unlike cavities, that their secretions and their bacteria contents vary greatly, and that they are much better neighbors when they are separated by a barrier of healthy tissues. In cases in which the opening persists between the two cavities, the only permanent method of closing the communication is by means of a plastic operation. I have closed many openings into the maxillary sinus by undermining the soft tissues around the edges of the defect, and then drawing the tissues together. This procedure will suffice in some cases, but in the majority of cases in which the opening is of considerable size, this method will fail, as the sutures will slough out, owing to tension. Dean [1] has described an operation for closure of the opening between the mouth and the maxillary sinus. He does not make very clear the arrangement of his flaps, but explains in detail his method of suturing and the materials used.

Infections of the maxillary sinus are often not diagnosed by the dental surgeon and are frequently poorly treated. After all that has been written on this subject, it is pitiable to pick up a modern dental journal and to read in a recent number an article advocating the use of the rubber plug, and further to read that

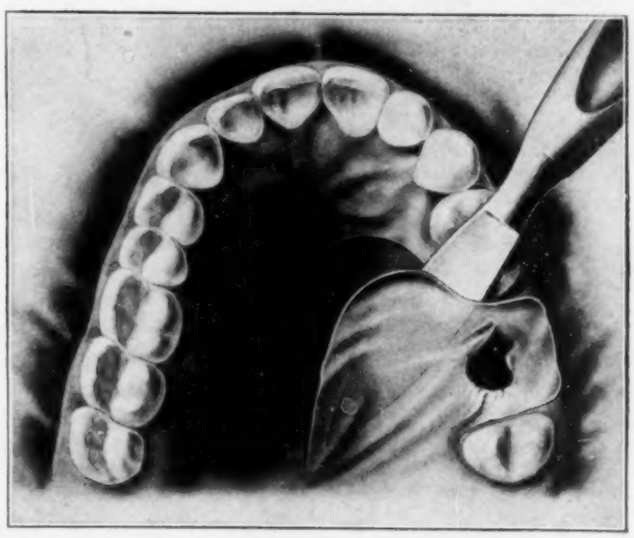

Fig. 4.—Releasing of palatal flap; orifice of typical mouth opening into maxillary sinus.

"the plug in the antral opening helps to hold the plate in place."

I once had a patient in the clinic who had suffered for years from a chronic maxillary infection and who had been treated in Vienna for this trouble. What the early treatment was in this case was vague, but for

1. Dean, L. W.: A Method of Closing a Sinus Between the Antrum of Highmore and the Mouth, J. A. M. A. **61**: 1613 (Nov. 1) 1913.

thirteen years he had been wearing a plate with a large plug projecting into the antrum. The condition of that antrum was remarkable. The cavity was almost obliterated by thick polypoid tissue, and, needless to say, it was badly infected. The lining membrane was more like leather than the normal tissue, and often the

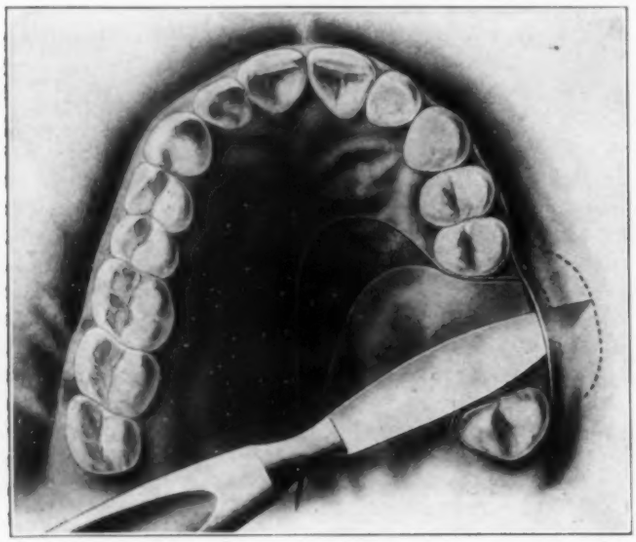

Fig. 5.—Palatal flap released and tucked under labial flap. This method insures a stronger union of the two flaps than the edge-to-edge procedure. The mucous membrane of the palatal flap must be removed when the flap is slipped under the labial fold.

patient had to relieve conditions by irrigating thrcugh the opening himself. He always carried a syringe with him, he told me. It was difficult to clean out this sinus, after it had been reinfected by the mouth for thirteen years, and the closure of the opening into the mouth was not easy.

For the closing of oral openings into the maxillary sinus, I advocate the operation described below, but I do not claim that it is original with me.

TECHNIC OF OPERATION

A flap operation was found to be the best, after several failures in trying to bring the tissues together. In closing over large openings I found that a flap from the labial tissues often was not very satisfactory, in that it was difficult to get enough tissue at times, and also that the tissue obtained was not very strong. The palate was turned to early in my experiments, and I am not sure whether I adopted the idea at Queen's Hospital, England, during my three months' stay there or not. It is now the only flap I use, and I feel that it is the most efficacious one. The tissue is thick and tough, and pares off evenly and easily. As shown by the illustrations, a palatal flap is taken, extending from the median line at the junction of the hard and soft palates anteriorly to about opposite the bicuspid teeth. The flap is thoroughly separated from the palate down to the periosteum, but the latter is not disturbed, as this allows for better granulating in of the defect caused by the sliding of the flap outward over the opening that is to be closed. The flap just described is very thick and, of course, is well nourished, as it has in its base the anterior palatine artery. The next step is to free the outer edge of the flap, and to free the opening to be closed of all soft tissue down to the bone. Any sharp edges of bone must be smoothed off, and often the alveolar process trimmed so that the flap will more than cover the opening without any tension, when sutured to place. The labial soft tissues are now very thoroughly undermined and freed, often upward to the extent of an inch or more on the anterior surface of the superior maxillary bone. The periosteum is not disturbed here either, and a very nice curtain of soft tissue is dropped to meet and overlap the original flap from the palate. Sometimes the anterior border of the labial curtain just dropped is freed so that a labial flap is thrown over the palatal one. This is done when the opening into the antrum is a large one. The palatal flap can be tucked under the foregoing labial curtain, or can be sutured over the curtain after the curtain has been sutured to place over the bony opening to be closed. It does not matter much which way one disposes of these flaps, if they are made to overlap each other like a double breasted coat and sutured securely. It matters little what material is used in suturing. I have used silk, horsehair and other materials, but prefer the horsehair and like it fairly heavy. The secret of success in this operation, as in all plastic operations, is to have plenty of tissue, no tension and good blood supply. I have not had one of these operations fail to close nicely the opening into the antrum, and it has become with me now the routine method of closing these annoying communications between the maxillary sinus and the mouth.

REPORT OF CASES

Case 1.—B. S., a woman, aged 23, with a large opening into the right antrum, due to extraction of the first molar, had had a large abscess of the first molar three months before coming to the clinic. The dentist removed the offending first molar and curetted freely the alveolar socket, leaving a large opening into the antrum. The antrum was very foul and the opening was packed with gauze intermittently for three months. The patient had had tuberculosis from three to four years before. Under local anesthesia I curetted gently the maxillary sinus, not removing the lining membrane, and irrigated the cavity daily for ten days. At the end of this time the antrum was quite clean, and a flap operation was performed. The wound healed immediately; there was no suppuration except around the sutures for a day or so. I irrigated through the nose three times to be sure of no accumulation of any infective material. Recovery was uneventful.

Case 2.—G. B., a man, aged 30, with infection of the maxillary sinus, had an abscess of the upper right second molar; the surrounding bone was diseased and there was a considerable area of necrosis. The second molar was removed but the antrum infection did not improve. This condition had

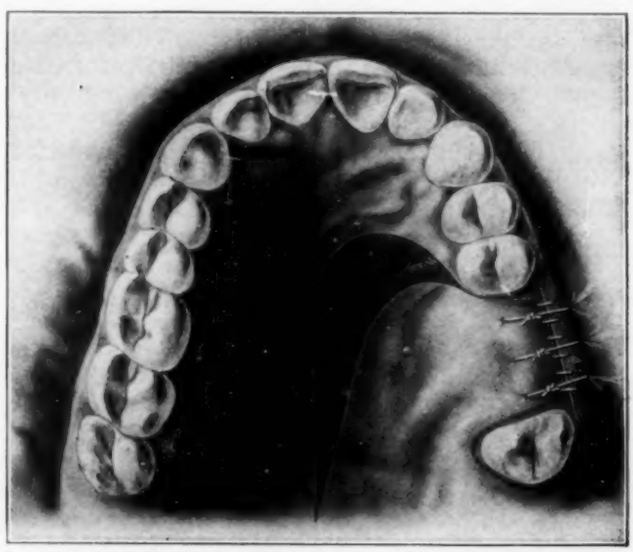

Fig. 6.—Flap sutured together, and final stage of operation.

continued for several months before the patient came to me. Under local anesthesia I thoroughly curetted the antrum, removing some polypoid tissue, but not removing the lining membrane. This was done through an incision over the canine fossae. The wound was sutured and then all necrotic alveolar process was removed with curet and rongeur. The antrum was closed by a flap operation. Several subsequent antral irrigations were given through the nose. The wound healed quickly. There was no infection.

CASE 3.—O. B., a woman, aged 40, with pain in the upper right jaw, had a slight discharge of pus through a small sinus in the first molar region. The patient had had some very poor bridge work inserted six months previous from the second molar to the first bicuspid. This bridge was always loose and painful and there was a discharge of pus from a small sinus under the bridge. Roentgenoscopy revealed a large area of infection over the second molar extending to the first bicuspid. The patient had always been poorly nourished and more or less ill. I removed the second molar, the first bicuspid and the canine with the bridge attached; laid back the soft tissues labially and from the palate; rongeured off much roughened bone, causing a large opening into the antrum over an inch in length; curetted the antrum thoroughly, removing much polypoid tissue; brought the soft tissues together as close as possible; inserted an iodoform drain, and irrigated and changed the drain daily for about ten days. The posterior part of the floor of the antrum was still wide open. The saddle plate was made to keep out food; the plate was worn for two months, with occasional washings through the nose. A flap operation was then performed, and it healed nicely. Two months' time was allowed to let Nature close off the opening as much as might be before operating.

CASE 4.—E. S., man, aged 50, with a large opening into the antrum in the region of the second molar, had had an abscess of the second molar about one year before. The tooth was extracted and its alveolus was curetted, leaving an opening the size of the end of a lead pencil into the maxillary sinus. This had been discharging for about ten months. No treatment except occasional packing with gauze had been given. Roentgenoscopy revealed much diseased bone. The past history was negative. I laid back the soft tissue and rongeured off much diseased alveolar process, opening the antral floor for about 1 inch. Through this opening I curetted the antrum thoroughly and removed much polypoid tissue. I irrigated and closed the antrum by the flap method. I washed through the nose occasionally. The wound healed nicely. The antrum was completely shut off.

CASE 5.—E. L., a woman, aged 25, with an opening into the antrum, had had an abscess of the second molar of the upper left side for six months previous to her coming to me. The alveolar process had been curetted, and there remained a persistent opening the size of the end of a lead pencil. The maxillary sinus had been infected but had been cured by the rhinologist who sent the patient to me. He had treated antral suppuration through the nasal route for forty-five months, but said that the opening into the mouth was not getting any smaller. The history was negative. As the maxillary sinus was cleaned and all the tissues were healthy a flap operation was performed at once. Healing took place virtually by first intention and the opening closed permanently, though mouth and antrum had been in communication for about six months.

CASE 6.—J. F., a man, aged 50, with an opening into the antrum, had an abscess in the upper first molar on the right side for about a year. The antrum was badly infected then, but by constant treatment by different men it became cleaner. The patient came to me with iodoform packing which had been used intermittently for eight months. He was a traveling man, and this was a great inconvenience to him. He carried his own outfit of gauze and instruments, and packed the cavity himself generally daily. He had always had bad teeth. I washed out the antrum daily for a few days through the nose and then performed a flap operation from the palate. I did not get my mucous edges arranged very well and had to perform a secondary operation to make the antrum tight. There persisted a little crack or slit through which the patient could force fluids. The secondary operation consisted in freshening the edges of the crack and suturing them together. The wound healed nicely.

CONCLUSION

In closing, I should like to make a plea for better diagnosis in these cases; to urge that drainage through the nasal route be used in the majority of cases, and that the communication between the antrum and the mouth be closed as soon as possible.

THE TREATMENT OF BLADDER TUMORS

WITH ANALYSIS OF SIXTY-TWO CASES *

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In spite of notable advances during the last decade, the treatment of tumors of the bladder continues to occupy a prominent place in the thought and problems of urologists. This is doubtless due to much dissatisfaction relative to the end-results in many of these cases, notably those of carcinoma; also to certain hopes entertained because of the promises of electricity and radium in recent years. Indeed, owing to the proclivity of even benign growths or papillomas to recurrence or adjacent surface implantation, even in

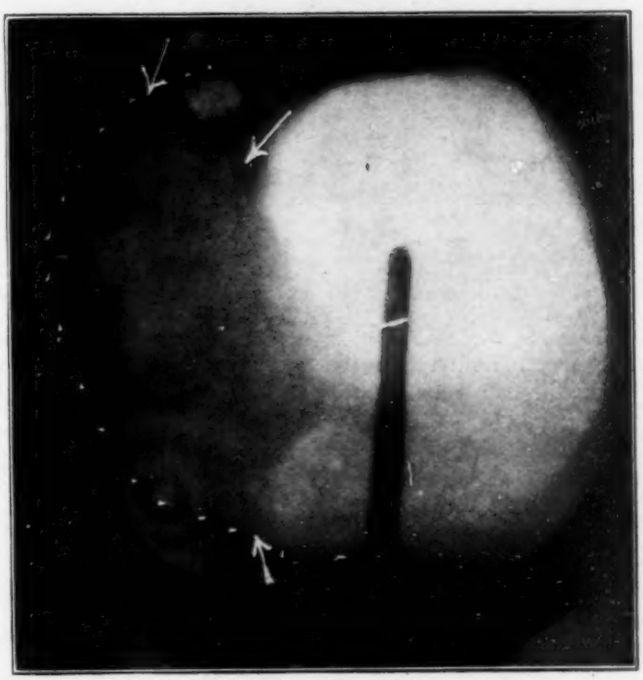

Fig. 1.—Carcinoma, Case 27, further illustrated in Figure 22. Figures 1, 2 and 3 are aero and bismuth cystograms employed to demonstrate the benign and the malignant character of bladder tumors. Figures 1 and 2 were taken by Dr. G. E. Pfahler.

the cystotomy wound itself, the results of incisional forms of treatment in the past were so discouraging as to make bladder tumor cases unwelcome in the practice of surgeons, and not infrequently altogether precluded conscientious surgical intervention.

It is generally recognized that the work of Beer, in 1910, in placing the high frequency cystoscopic treatment of papillomas of the bladder—defined as fulguration, electrocoagulation, desiccation, or what not—on a practical basis, has caused a complete revolution in the surgery of this type of tumor, marking a new epoch in the management of these troublesome bladder growths. The results of cystoscopic electrocoagulation of papillomas have easily measured up to expectations;

* Read before the Section on Urology at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

* Owing to lack of space, this article has been abbreviated for publication in THE JOURNAL by the omission of a large table giving an analysis of the cases. The complete paper appears in the Transactions of the Section and in the author's reprints.

and although recurrences are quite common, they are not only less frequent than after incisional treatment,

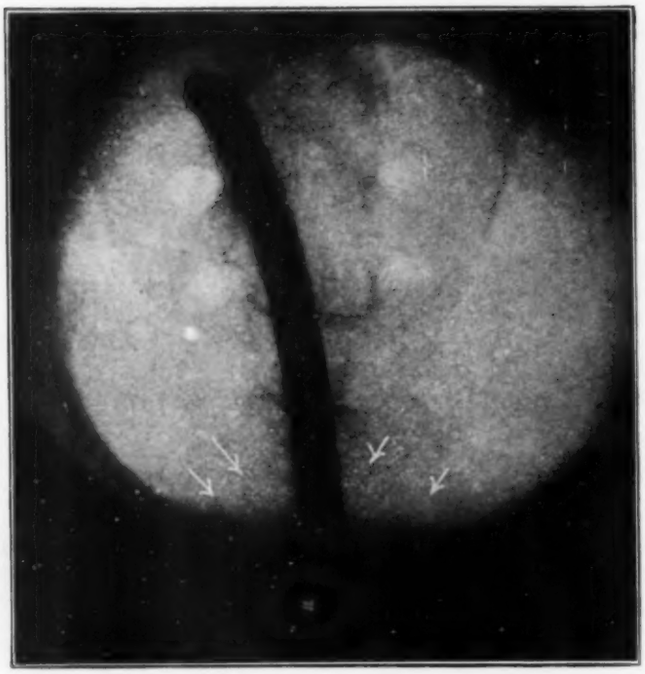

Fig. 2.—Papilloma and beginning carcinoma, Case 60, further illustrated in Figure 24 *b*. The roentgen ray fails to disclose any shadow in the right trigon occupied by a large papilloma; in the region of the sphincter, suspicious shadows indicate early carcinomatous degeneration.

but when recurrence takes place, the condition is amenable to a repetition of similar treatment, whereas

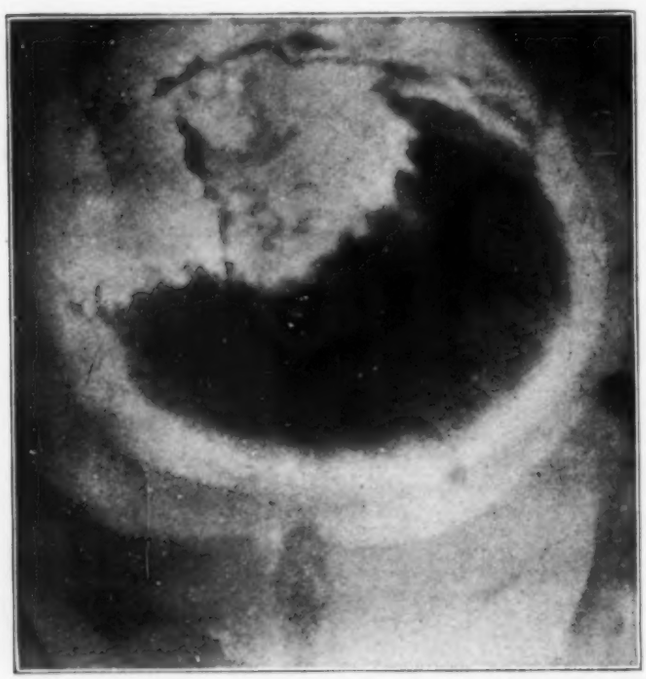

Fig. 3.—Papilloma, Case 47. Bladder first injected with air, and then a suspension of bismuth subnitrate. The air may be seen as the light zone surrounding the bismuth, the latter defining the fimbriated projections from the surface of the papilloma, also seen as deposits between the lobulations of the tumor.

the number of major surgical operations to which a patient can be subjected is assuredly limited.

On the other hand, if the tumor is malignant (carcinoma or sarcoma) and discovered early and situated favorably, any form of treatment other than radical operation should not be considered.

The primary, fundamental and all-important consideration as to the proper treatment of the various intravesical growths, benign or malignant, whether electrical, operative or palliative, should rest chiefly with the experienced cystoscopist, although, occasionally, indispensable assistance will be rendered by the cystogram (Figs. 1, 2 and 3), the histopathologic examination of an excised section of tissue (Figs. 4 5, 6 and 7) and the general physical condition of the patient. The importance of correctness in the differential diagnosis of these bladder growths cannot be too strongly emphasized, because thereon directly depends the proper line of treatment. This may be thus summarized:

1. If the tumor is a polyp, hemangioma or papilloma single or multiple (Figs. 8 to 19), the treatment *par*

Fig. 4.—Section taken from surface and pedicle of bladder tumor, Case 60, showing benign and malignant states in respective areas.

excellence is cystoscopic fulguration or electrocoagulation, the Oudin or d'Arsonval high frequency current being employed. It should be observed in this connection that occasionally cases of papillomas are encountered in which cystotomy under local or general anesthesia, associated or not with transfusion, must be performed for the removal of clots, at the same time removing the tumor by the electrocautery or destroying it by fulguration; cases of vesical papillomas are also seen in which the growth involves the entire bladder (Fig. 14) or hematuria so marked or the urethra so small or supersensitive as to render cystoscopic treatment unsatisfactory and impracticable. The thought has arisen that in cases of multiple and recurrent papillomas it might be advantageous to supplement the high frequency destruction of the papillomas by radium applications, on the assumption that by virtue of the deeper penetration of the radium rays, recurrences would be less common, if not prevented entirely. I have practiced this procedure in a number of cases, but feel that deductions now are premature.

2. In selected cases of early malignant tumors, especially those involving the vesical orifice (Figs. 22, 24 *a* and 24 *b*) when complete resection of the tumor-bearing area is impossible, it is desirable, after cystotomy, to destroy the growth by fulguration and then to implant radium in the tumor bed, employing needles, each containing 12.5 mg. In conjunction with Dr. George E. Pfahler, I have treated a few patients in this manner, utilizing as many as eight needles or 100 mg., leaving them implanted in the base of the tumor for eighteen hours. Here, too, insufficient time has elapsed to judge of superior results.

3. In the case of malignant growths, favorably situated (Fig. 20) and not too far advanced, the first thought should be extraperitoneal resection or combined extraperitoneal and intraperitoneal resection of that portion of the bladder occupied by the carcinoma, one or both ureters being transplanted if necessary. Very rarely a case may be seen in which the vesical orifice is involved (Fig. 21) in an othehrwise exceptionally robust individual. In such a patient total cystectomy, preceded by bilateral nephrostomy, in preference to lumbar ureteral fistulization or bowel implantation, may be successfully performed. I have described and illustrated the technic of these operative procedures elsewhere.[1] With the bladder, as with other organs in the body, surgical intervention for carcinoma should always be supplemented by intensive roentgen-ray cross-fire.

Fig. 5.—Another section from surface and pedicle of bladder tumor, Case 60, showing benign and malignant states in respective areas.

4. In that unfortunate group beyond the hope of cure by radical surgical procedures, we feel compelled to do something for the relief of distressing symptoms. During the last year surgical endeavor has received fresh impetus from the recommendation to employ multiple needles of comparatively small quantities of radium embedded in the growth. The method adopted by us has been first to destroy by fulguration all visible and palpable evidence of diseased tissue through the cystotomy opening, and then to implant the radium needles throughout the tumor-bed, allowing them to remain from six to eighteen hours before removal. There are two classes of patients in this deplorable group, the one, in which the procedure just described is applicable, the other, in which the organic condition of the patient is too precarious even to warrant cystotomy or cystostomy except to deviate the urinary stream in cases of retention, as a preliminary measure to death. In such cases, pain and hemorrhage may be relieved by a combination of roentgen-ray cross-fire and radium applied with carriers by urethra and rectum (Fig. 23).

Fig. 6.—Typical carcinoma, Case 50.

Fig. 7.—Low power photomicrograph of section of tissue showing characteristic tuberculosis of bladder in an old man with persistent suprapubic fistula, who two months previously had been cystotomized erroneously for prostatectomy.

1. Thomas, B. A.: Technic of Operative Treatment of Bladder Tumors, Surg., Gynec. & Obst., August, 1915, pp. 135-150.

Our experience with the treatment of bladder tumors comprises sixty-two cases, thus divided: carcinomas, thirty cases; papillomas, twenty-five cases; polypi, six cases, and hemangioma, one case. In many instances the growths were multiple, so that the number of tumors treated easily doubled the cases represented. This analysis does not include four cases of gumma of the bladder, or a large number of tumors of the prostate involving the bladder. Men were affected about four times as often as women. Carcinoma occurred at all ages from 44 to 80; papilloma from 33 to 72; polypi from 38 to 77, and hemangioma at 70. Thus it is seen that age is of no importance as a factor in differential diagnosis. The duration of symptoms of the various growths varied from two weeks to twenty-five years. This is of importance only in its relation to the time the majority of these patients were treated medically, and hence deprived of the all important and urgent information to be obtained from competent cystoscopy, and, therefore, of the proper treatment that in many instances, if resorted to early, would prove to be curative. Such negligence or incompetence on the part of the patient or his physician frequently seals the fate of the misguided patient and leads him to a cancer death. Blood, pus, urinary frequency and dysuria constitute the quartet of danger signals from the urologic tract, and that physician who lightly and wilfully ignores those signals, unless he is convinced that the trouble is solely urethral and is satisfied to prescribe some urinary antiseptic for a few days and fails to have his patient thoroughly investigated to learn the source of the blood and pus, is guilty of a medical misdemeanor no less reprehensible than the crime of manslaughter. In this series, forty-two patients, or approximately two thirds, received nothing but medical treatment previously for months and years; only twelve patients had been cystoscoped before, and nine of these had had some form of surgical treatment, usually a cystotomy with attempted removal of the growth. Recurrence invariably occurred and not in a single instance was the procedure followed by permanent cure. In twenty-one cases of papillomas (including one of papillary carcinoma), nine of carcinoma, five of polypi, and one of hemangioma the patients were treated cystoscopically by the high frequency method (electrocoagulation, desiccation or fulguration). The number of treatments (Oudin, 90 per cent. and d'Arsonval, 10 per cent.) required to destroy the growths varied from one to nineteen. In this connection it should be stated that in many cases the growths were multiple—in one case no less than twenty-four papillomas were present, and in another case the

Fig. 8.—Polypi or polypoid formations at the vesical orifice.

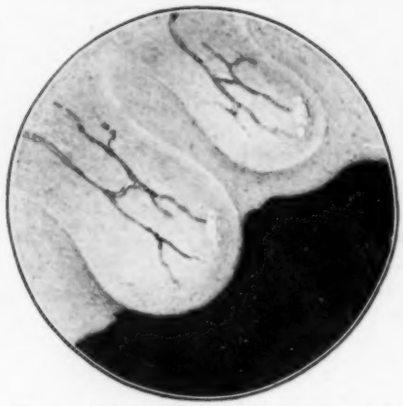

Fig. 9.—Polypi or polypoid formations at the vesical orifice.

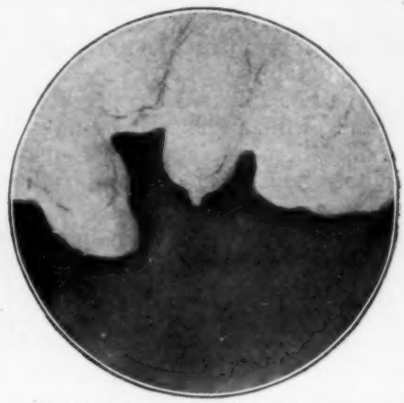

Fig. 10.—Polypi or polypoid formations at the vesical orifice.

Figures 8 to 23, inclusive, illustrate types of bladder tumors as viewed through the cystoscope. Tumors of the types illustrated in Figures 8 to 19 are invariably successfully and best treated by cystoscope fulguration; those in Figures 20 to 23 should never be so treated.

Fig. 11.—Hemangioma.

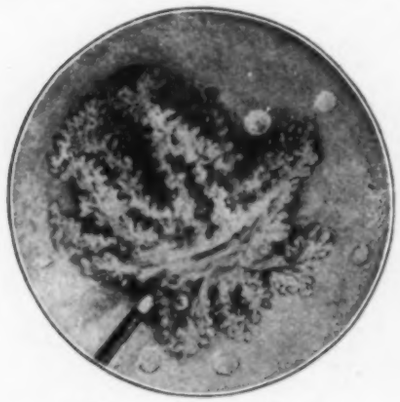

Fig. 12.—Single papilloma.

Fig. 13.—Single papilloma.

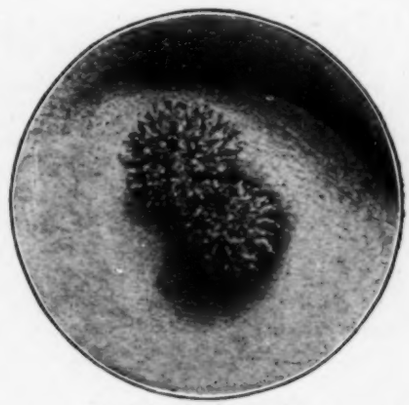

Fig. 14.—Multiple papillomas.

bladder was literally filled with the papillomatous growth. In approximately one half of the cases of papilloma there was recurrence, varying from two to ten times. In only one of the four cases of carcinoma thus treated was the patient benefited. This was the case of papillary carcinoma, or carcinomatous degeneration of a large papilloma, the pedicle remaining benign (Fig. 19). As was to be expected, the cases of polypi and hemangioma have been apparently cured without recurrence. In two cases of inoperable carcinoma, electrocoagulation was supplemented by radium by the urethra, but apparently without appreciable value. Recently, in cases of multiple papillomas, following their destruction by the high frequency current, we have placed 50 mg. of radium in the bladder, by the urethra, over the affected area for twenty-four hours, entertaining the hope and belief that by virtue of greater penetration of the radium rays, recurrence might be prevented.

Fig. 15.—Multiple papillomas.

Fig. 16.—Multiple papillomas.

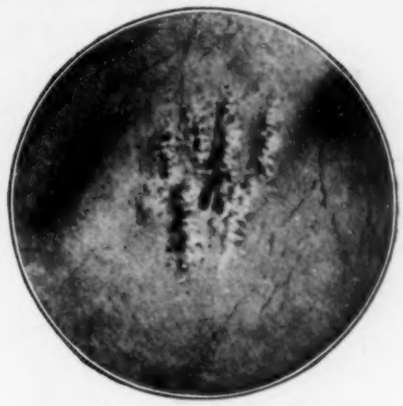

Fig. 17.—Multiple papillomas.

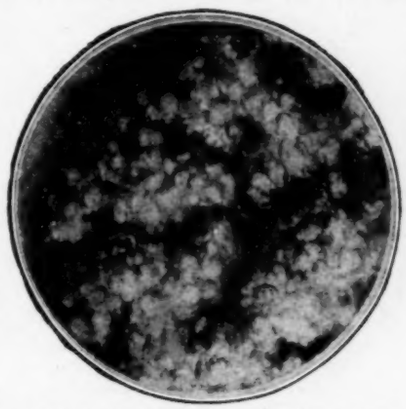

Fig. 18.—Papilloma growing from diverticulum.

Cystotomy was performed in ten cases—by compulsion in two cases of papillomas because of blood clots filling the bladder. In both of these cases preceding and following the operation, transfusions were necessary. In the five cases of carcinoma, the cystotomy was associated with removal of the tumor desiccation through the cystotomy wound, supplemented in two of the cases with radium. Although one of these patients, in whom the carcinoma was removed by the electrocautery followed by radium, has been well and free from symptoms for five and a half years, we believe the rational procedure today with such growths to be destruction of the tumor mass by desiccation through the cystotomy wound, supplemented by the implantation of radium for from eighteen to forty-eight hours, preceded and followed by intensive roentgen-ray cross-fire. We refer here, obviously, to those cases of carcinoma in which resection of the bladder is not practicable. The implantation of multiple needles of radium of small amounts (12.5 mg.) throughout the carcinomatous mass, instead of its removal or destruction by the high frequency spark, followed by the embedment of large amounts of radium (from 50 to 100 mg.) has been employed so recently that comparative statements for superiority in treatments at this time are premature.

The cases in which resection of the bladder, with or without transplantation of the ureter, is practical and advisable are comparatively few. Our experience has been a mortality rate of 50 per cent., which is doubtless too high. When successfully accomplished it offers the patient the best hope of permanent cure. Total cystectomy is likewise a hazardous procedure, yet it has been successfully performed once in this series of cases.

From simple cystostomy or cystotomy combined with the roentgen ray or radium, like Coolidge tube cross-

Fig. 19.—Papillary carcinoma.

Fig. 20.—Carcinoma favorably situated for radical resection of bladder.

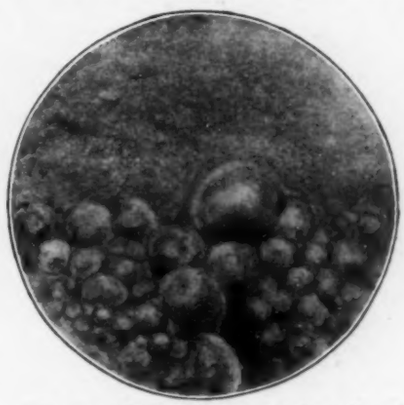

Fig. 21.—Polypoid degeneration of entire trigon and sphincter, cured by total cystectomy.

fire and radium suprapubically, perineally, by urethra and rectum, which are purely symptomatic measures, little need be expected and little will be realized in advanced, inoperable cases; nevertheless, they serve as a parting Esculapian effort prior to death's victorious toll.

Disregarding the inoperable cases in living patients, also the nontraceable incurable carcinomas in patients most of whom are dead, and those at present undergoing treatment, we find that there are fifteen known deaths, all due to carcinoma, save two who died from intercurrent disease years after cure of their papillomas. In the entire series of sixty-two patients, thirty-two are known to have been cured, either temporarily or permanently, twenty-one without recurrences and eleven with recurrences (two patients cured of papillomas subsequently died of intercurrent disease). Of these so-called cured cases, twenty-four were papillomas (one papillary carcinoma), five were polypi, and two were carcinoma and hemangioma. Of eighteen patients subjected to operative procedures supplemented or not with electricity or radium, nine, or 50 per cent., died in the natural course of their disease, excepting two operative deaths, a mortality of 14.3 per cent. Of the nine living patients who have been operated on, five had carcinomas, three had papillomas, and one multiple polypi. It is of interest to note that in three fatal cases of carcinoma the patients had been operated on elsewhere a few years previously for papillomas.

Fig. 22.—Extensive carcinoma with cauliflower outgrowth infiltrating entire lateral wall of bladder.

Fig. 23.—Advanced, inoperable carcinoma involving entire base and neck of bladder.

The period of observation of the living and apparently cured patients has extended from a few months to eight years. There have been about a dozen inoperable, rebellious, or thus far nontraceable cases of carcinomas, in which the patients have died without any treatment, and whose longevity has not yet been determined. In a later report I shall compare the life expectancy of these unfortunates with those victims of radically inoperable carcinoma who have had their dying days interrupted by operations, fulguration and radium implantations.

CONCLUSIONS

I must again emphasize that:

1. The cystoscope is all important in differentiating the various vesical tumors, their nature, location and extent, in order to determine the most appropriate and best form of treatment, and not the least as a periodic follow-up to detect and control as early as possible any evidence of recurrence.

2. In exceptional cases the differential diagnosis will depend on the histopathologic examination of an excised or removed section of tissue and on the cystogram.

3. The treatment, *par excellence*, of papillomas single or multiple, is the so-called cystoscopic high frequency fulguration, although rarely cases will be observed in which such treatment is impossible, necessitating cystotomy and other surgical procedures.

4. Resection of the bladder, with or without ureteral transplantation, is the only rational treatment for early and favorably situated carcinoma.

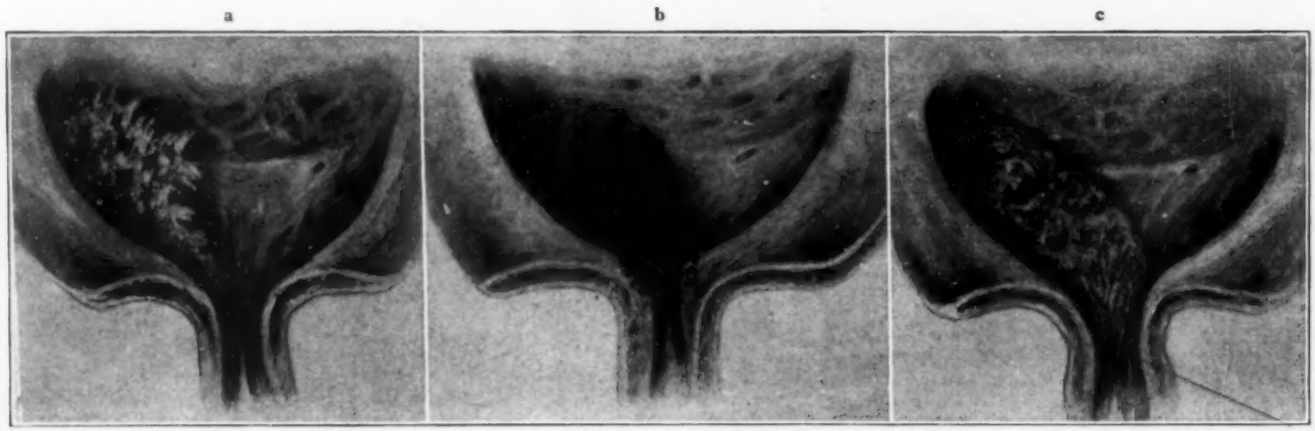

Fig. 24.—Types of early carcinoma of bladder involving the vesical orifice. These tumors are not favorably situated for radical resection of the bladder and may be best treated by cystotomy, intensive fulguration to destroy all visible and palpable evidence of diseased tissue, multiple implantations of radium needles in the bed of the growth, and intensive roentgen-ray cross-fire following the operation.

5. For malignant disease involving the neck of the bladder, total cystectomy, very exceptionally, may be performed.

6. In certain cases of carcinoma, unfavorably situated for resection or too far advanced for radical treatment, cystotomy followed by intensive fulguration, radium implantation and roentgen ray is on trial, with a promise to prolong life and possibly rarely to effect cure.

7. In advanced and inoperable carcinoma of the bladder, palliation consisting of cystostomy if retention

of urine exists, and roentgen ray and radium for relief of distressing symptoms, offers little consolation for the futile endeavors and vain efforts of the conscientious surgeon.

THE SURGICAL TREATMENT OF MALIGNANT TUMORS OF THE BLADDER

RESULTS OF OPERATIONS *

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ROCHESTER, MINN.

The greatest danger and difficulty in radical surgery of the bladder such as is required for extirpation of a malignant neoplasm is infection in the field of operation. In the majority of cases the urine is loaded with organisms and usually there is an accompanying cystitis, and, in not a few cases, a pyelonephritis, conditions not only serious in themselves and often impossible to prevent from extending, but which also expose the operative field to the infection. The area from which a segment of bladder has been removed lies in a dependent pocket from which it is difficult to establish satisfactory drainage, so that it is imperative that the technic shall be carried out as accurately as possible, which necessitates large incisions with free exposures and ample protection to the uninvolved tissues.

Resection of the bladder is more difficult than resection of almost any other abdominal viscus; first, because of its inaccessibility beneath the pubic bone, which makes it hard to see the various steps of the operation, and secondly, because it is not covered with peritoneum. The bladder is more or less fixed in the pelvis, and an incision in its wall will not heal with the same rapidity and certainty as one in a viscus that has peritoneum for its outer coat.

Malignant tumors of the bladder are either papillary epitheliomas or carcinomas. Rarely some of the other forms of malignancy involve the bladder. Papillary tumors of the bladder may be either benign or malignant, and in some instances it is very difficult to distinguish one from the other. Such tumors produce the same symptoms and have the same appearance on cystoscopic examination. It may even be difficult to distinguish them histologically, but it is always advisable to have a microscopic examination made of a section of the tumor, as it may reveal its real nature.

The type of the papilloma is extremely important in determining the treatment, as it is generally conceded that very satisfactory results can be obtained in benign papillomas by fulguration, and in malignant papillomas that it is best to excise the tumor. If there is some uncertainty with regard to malignancy, and the tumor is small and such as ordinarily would respond to fulguration, it is best to try this treatment at least as long as it is evidently accomplishing something. Often fulguration may be a good test of the nature of papillomas as malignant papillomas, instead of being reduced by it, seem to be stimulated in their growth. If there is any uncertainty as to the pathology of a papilloma of the bladder, the growth should be observed most carefully during the fulguration, and the treatment discontinued if there is no response within a reasonable time. This, of course, must be determined by the physician giving the treatment; but the point should be emphasized that a number of patients have been observed in whom fulgurations have been continued for a year or more while seemingly the growth had been progressing. Such patients have little chance from operation. The results of any form of treatment for malignant tumors of the bladder are not entirely satisfactory, but the late stage of the disease at which operation is performed in many cases is apparently responsible for some of the unsatisfactory results. Fulguration gives very gratifying results when it is used in the proper cases.

Carcinomatous tumors of the bladder are of two types: first, the superficial ulcerating growth which has a tendency to extend on the mucous membrane and which does not often penetrate the wall of the bladder, and second, the large, hard, ulcerated carcinoma which penetrates the muscular coats of the bladder and often extends into the perivesical adipose tissue. The superficial carcinomatous ulcer has much the same appearance as an epithelioma of the lip. It is slow growing and very slow in metastasizing; complete excision gives the best results. The penetrating carcinomatous ulcer appears more like the carcinomatous ulcer common in the rectum. Even when the ulcer is small and seems to be of recent development, usually by the time treatment is begun it has penetrated all of the bladder musculature and involved the adjoining tissues. The depth of the tissue involved is often greater than the extent of the ulcer on the mucous membrane. In spite of the extension, however, this type of malignancy is comparatively slow in metastasizing to distant points or even in extending to the nearest lymphatics.

We have previously called attention to the fact that nearly all patients with cancer of the bladder also have extensive growths involving the perivesical tissues before there is any evidence of metastasis. This was a striking finding in our present series. In several of our cases in which necropsies were performed, the death was found to be due to local malignancy and infection and not to metastasis. In a few cases it was necessary to abandon the radical operation because of involvement of the lymphatics along the iliac vessels, but this has been rare. It is at least gratifying in performing radical operations in cases of vesical tumor to know that the possibility of a distant lesion is slight; this fact we believe justifies the radical procedure. It seems that under these circumstances the results of operation should be better. While local recurrence is very uncommon following radical operations for cancer of the breast, stomach and kidney, it is often found following operations for cancer of the bladder. If some method can be devised of reducing the local recurrences in these cases, the results will be better than those obtained by operations for cancer in other regions.

The operability of carcinoma of the bladder should be decided first by ruling out so far as possible all chance of distant metastasis. If the growth is attached to the rectum, or if it is a fixed, hard mass involving the base of the bladder, the prostate and the seminal vesicles, there will be little chance of eradicating the disease by excision, and it should not be attempted. It is often difficult to determine the extent of the

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malignancy by the cystocopic examination, as frequently there is extensive bleeding and sloughing. It is especially difficult to decide in cases of large papillary epitheliomas whether or not the growth is operable; the location of the growth is often a determining factor. If the region of the sphincter muscle is involved so that it is necessary to destroy the muscle in order thoroughly to remove the growth, it is best not to operate except in certain selected cases in which it seems advisable to remove the entire bladder. If the sphincter control is destroyed, it will be difficult to keep the patient comfortable.

Probably the most inoperable tumor of the bladder is situated at the vesical neck. About 90 per cent. of all tumors of the bladder originate close to the ureteral meatus; frequently the meatus is involved, and the ureter is completely or partially blocked by the growth. The ureter is usually not involved except at the meatus. Fortunately, this condition does not in itself add greatly to the risk of the operation in which the meatus and as much of the ureter as necessary are removed. If it can be determined that any degree of kidney function remains, every effort should be made to reimplant the ureter into another part of the bladder. We have followed this plan in many cases and have seen a number of the patients several years later; in most instances the kidneys with transplanted ureters were functioning normally. In one instance, however, the kidney and ureter were removed nine years after the transplantation. At the time of the removal, the pelvis of the kidney and the lower end of the ureter were filled with stones and the kidney was functionless. The patient gave a history of having passed renal calculi before the resection. If the kidney is known to be functionless or if the malignant process involves the lower end of the ureter so that a portion of it must be removed, it is apparently sufficient to ligate with a permanent ligature and allow the ureter to drop back into its normal position. In the many cases in which we have been obliged to carry out this procedure, we have been surprised by the slight effect it apparently had on convalescents. In two acute cases in which we knew that renal infection was present at the time of ligating the ureter, we later removed the infected kidney. In one case we removed the kidney because of infection four years after the ligation of the ureter. The complication of the involvement of the ureteral meatus can be met very satisfactorily. If the tumor is in the dome, it can be removed completely without interference with function, and with an extremely good chance of ultimate cure. The results have been strikingly good in the cases of tumor of the dome in which we have operated. While this may be due partly to the fact that extension may be slow and less likely from this area, possibly if tumors in other areas of the bladder could be removed as successfully as those in the dome, the results would be better. Since carcinoma of the dome usually penetrates all of the bladder wall and the peritoneal coat, a part of the peritoneum must be excised. Transperitoneal operations are reserved for cases in which the peritoneum is involved. Although opening the peritoneum complicates the operation, it should be done if it is necessary to the performance of a complete operation; but it is not an aid in operating for the tumors of the base of the bladder, and therefore should not be made. A large incision down to the peritoneum, however, is very essential for exposure.

While the results obtained from radical operations for cancer of the bladder are not so good as we hope they will be in the future, they are not altogether discouraging.

For the purpose of this study, Dr. S. W. Harrington reviewed all of our cases in which operation was performed from January, 1910, to January, 1919. We have succeeded in keeping in touch with all except eighteen of the 202 patients. The hospital mortality in the entire group, from all causes, was 12.9 per cent. This is higher than the mortality in the last few years. The mortality may be greatly reduced by preparing the patients for the operation in much the same manner as patients are prepared for prostatic operations, since conditions are somewhat similar. If there is residual urine and much infection in the bladder and kidneys, it is always best to institute repeated or even permanent catheterization for some time before operation. Early in our experience we sometimes attempted to remove malignant growths which had extended into the surrounding structures so far that we were

TABLE 1.—CASES OF MALIGNANT PAPILLOMA OF THE BLADDER IN WHICH OPERATION WAS PERFORMED BETWEEN JAN. 1, 1910, AND JAN. 1, 1919

	Number
Total	202
Hospital mortality	26
Of the remaining 176, received no reply	18
Of the remaining 176, received report concerning	158
Of the 158 replies, dead	94
Of the 158 replies, living	64

TABLE 2.—LAPSE OF TIME SINCE PATIENTS NOW ALIVE WERE OPERATED ON

	Number
Number living 10 years	2
Number living 9 years	2
Number living 8 years	2
Number living 7 years	3
Number living 6 years	5
Number living 5 years	12
Number living 4 years	3
Number living 3 years	10
Number living 2 years	13
Number living 1 year	12
Total	64

TABLE 3.—TIME OF DEATHS OF PATIENTS AFTER OPERATION

	Number
Died 7½ years after operation	1
Died between 4 and 5 years after operation	2
Died between 3 and 4 years after operation	1
Died between 2 and 3 years after operation	4
Died between 1 and 2 years after operation	23
Died between 6 months and 1 year after operation	22
Died within 6 months after operation	37
Date of death not known	4
Total	94

TABLE 4.—RESULTS ACCORDING TO TYPE OF OPERATION

Types of Operation	Cases		Mortality
	No.	Per Cent.	
Cautery excision of growths	38	18.8	4
Resection	26	12.9	5
Exploration (with or without cystostomy)	20	9.9	2
Resection and transplantation of ureter	18	8.9	3
Excision of area and cautery	13	6.4	1
Removal of tumor and Percy cautery	11	5.4	0
Resection and cautery	8	4.0	0
Excision of growths	7	3.5	1
Palliative cautery to growths	7	3.5	0

obliged to abandon the procedure, and leave carcinomatous tissue. This, of course, added to the immediate mortality.

By proper attention before operative measures are undertaken, and by the selection of suitable cases for operation, the immediate mortality can be kept well under 10 per cent. The ultimate results are about the same as those following resections of the stomach and intestine for carcinoma. Twelve patients were operated on in 1910. Three (25 per cent.) are living and have no evidence of recurrence, two a little more than ten years, and one a little less than ten years after operation. In one of these cases, a complete cystectomy was performed and the ureters were brought out through the lumbar muscles. One of the patient's kidneys ceased to function after about two and one-half years, but the opposite kidney has maintained its function. The other two patients had transperitoneal resections of the bladder, one for carcinoma

TABLE 5.—RESULTS ACCORDING TO TYPE OF OPERATION

Types of Operation	Cases		Mortality
	No.	Per Cent.	
Resection of bladder and ligation of ureter	5	2.5	1
Resection, transplantation and cautery	5	2.5	1
Complete extirpation bladder, transplant.	5	2.5	2
Resection and prostatectomy	3	1.5	1
Resection, transplantation, prostatectomy.	3	1.5	0
Excision of area, ureters not disturbed	3	1.5	0
Cystostomy	3	1.5	1
Resection and cautery excision of growths	2	1.0	1
Resection, ligation and prostatectomy	2	1.0	0
Cautery excision and prostatectomy	2	1.0	0
Excision of area, cautery and prostatectomy	2	1.0	0

of the dome, the other for carcinoma of the base of the bladder involving the right meatus; the right ureter was transplanted. Nine years later the kidney and ureter were removed for infection and stones.

Table 2 indicates the number of patients who are living more than one year after operation. So far as can be determined, they are free from any trouble at present. For the last few years we have endeavored to have all these patients at regular intervals return to us for examination of the bladder, or to have an examination at their homes.

Frequently, a long time after operation for carcinoma of the bladder we have noted suspicious-appearing areas and granulating spots; undoubtedly, some of them are recurrences. If they are discovered while

TABLE 6.—RESULTS ACCORDING TO TYPE OF OPERATION

Types of Operation	Cases		Mortality
	No.	Per Cent.	
Cautery excision and transplantation ureter	2	1.0	0
Suprapubic stab drain	2	1.0	0
Resection, cautery and prostatectomy	2	1.0	0
Resection, transplantation, removal of tumor and cautery	1	0.5	1
Drainage of pocket	1	0.5	1
Resection one fourth right wall, excision area left wall, cautery	1	0.5	0
Resection, transplantation and excision of growths	1	0.5	0
Resection, transplantation and removal of seminal vesicle	1	0.5	1

they are small, they may be destroyed by repeated fulgurations. It is our opinion, however, that usually these granulations are not recurrences, since in a few instances an operation was undertaken for a supposed recurrence when the tissue proved to be only inflammatory. It is important that the patients should be followed closely for the first two years; after that, they should be reexamined at the first suggestion of further trouble. Most of the recurrences come within the first few months after operation; our statistics show that if the patient can survive the first year,

TABLE 7.—RESULTS ACCORDING TO TYPE OF OPERATION

Types of Operation	Cases		Mortality
	No.	Per Cent.	
Excision of area, ligation of ureter	1	0.5	0
Cautery excision, ligation of ureter	1	0.5	0
Excision of growths, transplantation of ureter	1	0.5	0
Excision of area of bladder, transplantation of ureter	1	0.5	0
Excision of diverticulum including bladder tumor	1	0.5	0
Cautery excision, enucleation of adenoma of prostate	1	0.5	0
Excision of area, cautery, transplantation of ureter	1	0.5	0
Perineal cystotomy	1	0.5	0

his chances to remain well are increased. One patient died of other disease after seven and one-half years; two lived four years; three lived three years; eleven lived two years, and fourteen lived one year. Forty-six patients died from six months to one year after the operation.

The operation for cancer of the bladder has been classified as excision when the lesions are small and necessitate the removal of little of the wall of the bladder. The entire thickness of the wall, however, was taken just as in the resections. Operations classified as resections usually involved the removal of at least one-fourth the entire bladder. Most of the operations were performed with the knife, and some with the cutting cautery; apparently the results are

TABLE 8.—SUMMARY OF RESULTS

Types of Operation	Cases		Mortality
	No.	Per Cent.	
Total resections	102	50.5	16
Total excisions	66	32.7	6
Total explorations and palliative operations	34	16.8	4
Prostatectomy done in connection with	14	6.9	1
Transplantation of ureter in connection with	36	17.8	8
Ligation of ureter in connection with	9	4.4	1
Cautery used in connection with	90	44.1	8
Removal of one or both seminal vesicles.	5	....	..
Diverticulum present	4	....	..

the same. We are rather surprised to find that a few patients in whom we could not remove the tumor but applied the Percy cautery have remained well for as long as six years. This is an indication that the Percy cautery should be used more often.

In all the patients who were cured, the functional results are very good. In many instances it has practically returned to normal. In some, frequency has persisted. If there is no recurrence, all symptoms subside rapidly, even when an extensive resection has been performed.

We have attempted to confine the report in the present series of cases to the results of surgical treatment. Thirty-four of the 202 cases were explored and no further surgery undertaken. These were the cases in which operability could not be determined before exploration. Some of the patients were treated later by roentgen ray and radium, and a number doubtless were benefited; but such treatments were not applied in the effective manner they are now being used. Radium, especially, if applied directly to the tumors, should have an effect as beneficial as it has in cases of carcinoma of the cervix of the

uterus, in which our results have been vary gratifying. Care must be taken not to allow the radium to come in contact with the normal mucous membrane, since it may produce a reaction resulting in the most terrific, painful spasms. Putting radium into the bladder indiscriminately not only fails to benefit in these cases but does actual harm. Our attempts to apply radium to the growth in these cases have not been entirely successful. If it can be shown that radium has the favorable effect on the epithelioma in the bladder that it has on epithelioma of the cervix, it will be best to perform a suprapublic cystostomy which not only affords drainage and relief of infection, but will make it possible to place the radium in direct contact with the epithelioma. In a few cases, we sutured the radium tube to the growth with fine catgut stitches. One of the arguments against the use of radium or fulguration is that both may be employed when a radical operation should be performed. We believe that radium should be reserved for the inoperable malignant tumors, and that fulguration should be reserved for the definitely benign tumors. If the radical operation is performed in suitable cases, the immediate and ultimate results should be very good.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. THOMAS, AND JUDD AND SISTRUNK

Dr. B. C. Corbus, Chicago: In cases of papilloma of the bladder Dr. Thomas stated that from the pathologist's view point it is difficult to differentiate a malignant from a benign growth. I agree with him. In one of our cases the mass covered the ureter. The tumor was burned by diathermy, and after the slough had disappeared, we found the ureteral opening about 4 cm. posteriorly and functioning. Syphilis of the bladder occurs during the secondary and tertiary periods. Reports have appeared describing discrete papules in secondary syphilis and gumma of the bladder. Much to my surprise I discovered tumor of syphilitic origin, identical with condyloma of the anus, which I have termed a vegetating syphiloma of the bladder. This tumor simulated a papilloma so closely that cystoscopically and macroscopically it was impossible to differentiate it from papilloma of the bladder. There was no history of syphilis. The Wassermann reaction was negative in our laboratory and slightly positive in another. The patient was greatly emaciated, weighing only 80 pounds. There was slight hematuria and dysuria. I operated and found the bladder wall pale and very thick, the bladder itself being much contracted. Examination of a section showed that it was not a malignant tumor. The patient was immediately put on antisyphilitic treatment. The mass disappeared entirely.

Dr. Victor D. Lespinasse, Chicago: The chief points of treatment mentioned have been fulguration, radium and resection, with the dictum that fulguration should be limited to benign tumors. Often we cannot tell whether the tumor is benign or malignant, but if we place a radium needle into the tumor mass, differentiation is not always necessary. I have used this method of treatment when the tumor was questionably malignant. It gives the advantage of radium application which is considered orthodox in the treatment of the malignant tumor and it also destroys the benign tumor. The technic is very simple. Put a good thread on the needle and pass it through a ureteral catheter. Usually the needles are a bit dull. By sharpening them they can be placed anywhere. More than one can be used, but it is not possible to place many at a time, for the original needle may be pulled out of the tumor.

Dr. Arthur B. Cecil, Los Angeles: We hear very little about the treatment of massive papilloma of the bladder. We are likely to regard these cases as almost totally hopeless. Several years ago Geraghty reported a case in which he had opened the bladder and used fulguration through the suprapubic wound in a general papillomatosis of the bladder. On more than one occasion in very extreme cases in which the patients were almost exsanguinated from hemorrhage from tumor of the bladder, I have opened the bladder and dipped out a large tumor mass and fulgurated the entire bladder wall. Although the wounds have necessarily been allowed to granulate, implantation did not occur. When the tumor mass fills the bladder and hemorrhage is constant, it is often advisable to open the bladder suprapubically, control the hemorrhage and carry out vigorous fulguration. Concerning ligation of the ureter in operating on tumors of the bladder, it must be understood that ligation is done only as a last resort as a method of handling the ureter. Ligation of the ureter must not be regarded lightly.

Dr. Abraham Hyman, New York: In the last eight years we have had in the service of Dr. Beer, at Mount Sinai Hospital, 180 cases of tumor of the bladder. For a number of years it was noted that approximately 75 per cent. of the tumors were papillomas; this percentage has been reversed of late, the majority of the growths seen being carcinomas. Not all cases of papilloma are amenable to fulguration treatment. In two types operation is the preferable procedure. In diffuse papillomatosis, in large growths encircling the sphincter, or in cases of tumor complicated by severe cystitis, the bleeding and pain produced by cystoscopy renders this form of therapy impracticable. It is advisable before subjecting a patient to a radical operative procedure or to radium therapy to roentgenograph the spinal column, so as not to overlook latent bone metastases. As regards implantation of tumor cells in the wound, I do not agree with Dr. Cecil. We have seen cases in which recurrences took place in the suprapubic scar after operation. In the operation for resection of the bladder described by Dr. Beer, especial stress is laid on the avoidance of wound implants. We have had two cases of total cystectomy for carcinoma of the bladder. In both instances the ureters were implanted in the anterior abdominal wall. One patient is alive and well seven years after cystectomy; the other died a few months after operation. Frequent cystoscopy after operation, whether for papilloma or carcinoma, is important. If possible, these patients should be cystoscoped at least every six months; recurrences, if present, can then be seen in an early stage and more easily handled. Our percentage of recurrence for papilloma after fulguration is not as high as Dr. Thomas'. Twenty-five per cent. of recurrences would be a fair estimate. Recurring papillomas occasionally manifest a tendency to undergo malignant changes. We have had two such instances, and others have been described in the literature.

Dr. Henry J. Scherck, St. Louis: Increasing experience with these growths of the bladder strengthens the conviction that it is important to handle these cases on the same surgical basis that we handle tumors elsewhere in the body. The choice of the proper procedure depends on the localization and determination of the type of the growth. I think we can assume that all papillomas of the bladder are potentially malignant. Therefore, the open operation, except when they are well pedunculated, is the operation of choice. Then we can do a complete excision or anything else that may be necessary. In the application of radium unless the bladder can be opened and the radium placed directly in the growth the procedure is dangerous. Papillomas are apt to recur. In the beginning of the fulguration treatment I was very enthusiastic about it, but the percentage of recurrences is increasing; therefore I believe now that the best method is the open operation, especially when the papilloma is situated around the neck of the bladder. Whether the growth is malignant or not is not of much importance. A microscopic study of these so-called benign papillomas will show that at least 25 per cent. are malignant.

Dr. Arthur H. Curtis, Chicago: What has been your experience relative to the symptoms and pathology on the part of the kidney after ligation of the ureter?

Dr. James A. Gardner, Buffalo: I once reviewed 1,702 cases of operations on tumors of the bladder performed by various operators. I found that a number of patients had been operated on once or twice by one surgeon and then passed

into the hands of another surgeon and even a third surgeon for more operations. Many operators reported that they had operated two or three times on the same patient. Dr. Keyes claims that the treatment of papilloma by intravesical high frequency current has given better results than any other method.

DR. HERMAN L. KRETSCHMER, Chicago: I was interested in Dr. Hyman's statement that he had seen bone metastases in cases of carcinoma of the bladder. We are usually taught that patients with bone metastases have carcinoma of the prostate, thyroid or breast, or hypernephroma. Recently I saw two cases of carcinoma of the bladder in which bone metastases were present. This is a rather unusual occurrence, but proves that carcinomas of the bladder may also produce bone metastases. Treatment of tumors of the bladder by fulguration is an easy and a good way to treat the largest number of papillomas. I agree with Dr. Hyman that it is wise to cystoscope these patients from time to time. It is this practice which has led to the more frequent discovery of recurrences. The results of treatment are not as good in the case of malignant tumors as in the benign growths. There are several reasons for this: first, the patients come in late in the course of the disease so that the growth is far advanced and radical operation is out of the question. Second, so many tumors are located around the neck of the bladder and ureteral orifice, and in all resection cannot be carried out. In several instances in which we resected the bladder containing the orifice the lower end of the ureter was ligated, as mentioned by Dr. Sistrunk, and we have not had any bad results; but in these instances the patients did not live more than a year, so that the remote results mentioned by Dr. Cecil did not have time to take place. If one knows the condition of the opposite kidney and is in a tight place, I can see no objection to ligating the ureter, if necessary. As to radium treatment: I cannot make any definite statements about our results because the patients have not been under observation long enough. I should like to mention, however, some of our unpleasant experiences with radium. In two instances, within a week or two after radiation patients have had severe systemic reactions; one patient died and the other recovered. There was no rise in temperature and it was assumed that as a result of the radiation there was an absorption of toxins, resulting in profound toxemia and which in the one instance led to death. In another instance a woman was given massive doses of radium and within three or four months she had a pelvis full of carcinoma, large glands in the neck and axillae, such as occur, for instance, in Hodgkin's disease, and we felt that these general metastases in that case were directly attributable to the use of radium. Transplanted tumors in the scar have been seen by us all. Not only is the benign papilloma transplanted into the scar, but there are cases on record in which the tumors removed were benign, and in which the recurrence in the scar was a malignant one.

DR. GEORGE E. PFAHLER, Philadelphia: A great deal of information may be obtained by infiltrating the bladder with air and then making a roentgen-ray examination. In only one instance have I failed to show the location and size of the tumor and the area of induration. The method is superior to cystoscopy. The technic is very simple. To my knowledge there has never been any harm or injury to the bladder. In some instances it will help to differentiate between malignant and benign growths because of the possibility of demonstrating the area of induration. In three cases we opened the bladder, destroyed the growth by electrocoagulation and then embedded the radium needles in the base of the tumor. It is my aim to destroy the tissues as long as they are hard. I believe that the best method is to implant radium needles into the base of the tumor after destruction. In advanced cases of carcinoma of the bladder the spine should be examined by the roentgen rays, especially when the patient is complaining of sciatica or pains in the back. In two instances the examination led to an examination of the bladder and the discovery of the malignant growth.

DR. ALBERT E. GOLDSTEIN, Baltimore: A patient who could not be cystoscoped satisfactorily was operated on for stone in the bladder, shown by the roentgen ray. Underneath the calculi, in the region of the left ureter opening, was a malignant papilloma about the size of a walnut. The condition of the patient was very poor so it was decided not to attempt any radical procedure. The bladder was drained for three weeks but he suffered a great deal of pain when urine passed through his urethra. On this account, a diversion of the urinary stream was decided on. I performed a ureterotomy on the right side, bringing the ureter into the groin. The patient improved somewhat. I expect to operate on the other side in ten days and then probably remove the bladder. By means of air inflation, one case of infiltrating carcinoma of the bladder was diagnosed roentgenographically. Operation verified the diagnosis. The tumor was resected and today the patient is free from his symptoms and doing very nicely.

DR. H. W. E. WALTHER, New Orleans: Pathologists aid us very little in coming to any conclusion as to the benign or malignant status of bladder tumors. Three weeks ago I applied the high frequency current to a single papillary tumor in the vertex of the bladder. The material from the tumor was examined and the pathologist made a diagnosis of benign growth. I cauterized the mass and fresh material was sent to the pathologist, who reported carcinoma. I immediately opened the bladder, did a complete resection, and the report came back carcinoma. One point not mentioned is the appearance of edema on the trigon following high frequency cauterization of these tumors. The literature does not contain any reference to this, but in several of my cases a bulbous edema developed following fulguration. I would like to corroborate what Dr. Corbus says about the advisability of having a Wassermann test made in all these cases of growths of the bladder. I had a case similar to the one he reports, with a strongly positive Wassermann reaction, and the "growth of the bladder" promptly cleared up on antisyphilitic treatment.

DR. A. J. CROWELL, Charlotte, N. C.: I wish to emphasize the point made by Dr. Kretschmer concerning the use of radium in these bladder tumors. It is quite important to keep in mind the possibility, or the fear, of systemic reactions following the use of radium. He reports the death of one patient following its use. I saw a very severe systemic reaction follow its use. Radium is one of the best remedies we have for bladder tumors or carcinomatous conditions of the prostate, but it should be used with caution.

DR. HERMAN L. KRETSCHMER, Chicago: Dr. Thomas showed a cystogram of a carcinoma of the bladder with a defect. The defects found in air distention are due to infiltration of the bladder wall by tumor. It just ocurred to me that when one has an extensive infiltration showing several defects, why cannot we recognize such cases with the cystoscope? In attempting to differentiate between a benign and an early malignant tumor we are in the habit of carefully examining the base of the tumor for the presence of edema or dilated vessels. I would like to know whether in the early cases, with the aid of the air cystograms, they were able to find changes which would lead to a diagnosis of a malignant tumor, changes that they could not demonstrate with the cystoscope.

DR. BENJAMIN A. THOMAS, Philadelphia: Whenever we are in doubt about the character of the tumor, we should always treat it as being malignant. Usually, we can be absolutely satisfied about the nature of the tumor by cystoscopy alone and can decide whether or not the condition is a papilloma. In more than 90 per cent. of cases you can decide by one or repeated cystoscopic examinations as to the benign or malignant character of the growth, just as well as by removing a section of tissue or by an air cystogram, provided that when in doubt the tumor be treated as carcinoma. I do not think it advisable to remove routinely sections of the tumor for examination; nor is it necessary, as a rule, to employ bismuth subnitrate to see the characteristic formation of the tumor. I am still convinced that the proper treatment in those cases which are not amenable to high frequency fulguration, as the papillomas and those tumors not suitable to radical operation, is not to resort to the use of radium by the cystoscope, but to do an open operation, if the organic condition is satisfactory, giving the patient the benefit of as complete a removal of the growth as may be by open inten-

sive fulguration, and then employing multiple radium needles much more extensively and effectively. If we have the entire tumor field under exact vision, palpation and complete control, we will get better results by this procedure than by working through a cystoscope with radium carriers that are in many instances unsatisfactorily applied and the applications not maintained to the best advantage. In respect to the use of radium, in the few cases I have treated I have observed remarkably mild reactions considering the intensity of the treatment. Invariably patients have passed through a mild convalescence. In no case was there a rise of temperature over 100 F. The point to be determined is whether 50 or 100 mg. should be left in for six, twelve or twenty-four hours. At the present time, this is to a certain extent a matter of empiricism.

DR. WALTER E. SISTRUNK, Rochester, Minn.: As a rule, these tumors involve only the portion of the ureter which lies in the bladder wall and in many cases we have been able to transplant the ureter when it has been necessary to remove a small portion of it with the meatus and still have a good functioning kidney. I merely mentioned the fact that the ureter could be ligated because every now and then it becomes necessary to ligate it during the course of the operation, and we have found from a fairly large experience that this can be done in the majority of cases without too much risk. I cannot answer the question in regard to the late results following ligation of the ureter, but I do not remember any of these patients having returned for another operation, except the one I mentioned. I think that the reaction in man following ligation of the ureter is different from that seen in animals. Harrington, in the experimental laboratories in Rochester, found that ligation of the ureter in dogs is almost always followed by a pyonephrosis and death of the animal, but I am sure that this is not the case in man.

RECLAMATION OF THE PHYSICALLY HANDICAPPED *

HARRY E. MOCK, M.D.
CHICAGO

Orthopedic and reconstructive surgery, industrial and reconstructive surgery, rehabilitation of the tuberculous and similar groupings of specialties with reconstruction and rehabilitation have become quite prevalent during the last three years. The efforts of the medical department of the army to reconstruct and rehabilitate the disabled soldiers is responsible for this new nomenclature in medicine.

Prior to the war there were numerous examples of reconstructing or reclaiming handicapped individuals and of rehabilitating them for future usefulness. The work of many schools for crippled children where educational methods and vocational training were carried on during the period of treatment of the disease; the efforts of a few tuberculosis sanatoriums where vocational work, now known by the term of occupational therapy, was conducted for the convalescent cases, and other examples stand out as pioneer work in reconstructive medicine.

Industrial medicine and surgery in its broadest sense as applied in a few industries of the country furnished the best example of this type of practice. In these concerns handicapped employees received medical or surgical care until they had been functionally restored and were then placed at occupations suitable to their physical qualifications. Some of these employees even received vocational training in the plant for specialized jobs where they could be 100 per cent. efficient in spite of their handicaps. This work was not confined to amputations or other types of traumatic cases, but included those employees handicapped by heart disease, by tuberculosis, by nephritis, by nervous disorders, etc., as well. In fact, the examination of applicants for work, when carried out on a humane basis, was an outgrowth of this effort scientifically to place handicapped persons in suitable employment. Several years ago I developed this formula, which is a prime factor in that branch of medical economics known as rehabilitation of the handicapped patient:

Physical qualifications + Occupational qualifications = Job.

With the experiences gained from industrial medicine and surgery during the last decade, and with the impetus given to the work during the war, the profession is now viewing its results more and more in the light of the future economic usefulness of each patient. The physician who simply cures his patient without giving heed to the functional result obtained or to the future employment of the individual is falling short of his duty. The recognition of this truth is the great contribution of reconstructive medicine to our profession. It has caused us to link hands with the educator and with the personnel managers in industry to the end that all handicapped individuals may once more become productive units of society.

Statistics show that annually 875,000 men and women are disabled for more than four weeks as the result of accidents sustained in industry; that annually 76,000 people suffer loss of members, and at least 200,000 are otherwise permanently disabled by these industrial accidents, and that 28,000 of our people are annually killed by industrial accidents.

Because of the nonreporting of occupational diseases, it is impossible to obtain statistics; but it is conservatively estimated that at least 250,000 more people are annually permanently disabled as the result of occupational diseases, and the deaths from these reach into the tens of thousands. Thus, the total number of permanently disabled from industry can be placed at half a million. From the farms, from the streets, and from the diseases and accidents of everyday life there is certainly added another million of handicapped individuals annually. Each year the total of already existing cripples is being augmented by this new annual crop.

When we consider that 30 per cent. and more of our young manhood between the ages of 20 and 30 were found in 1917 to be handicapped, that many of these had greatly lowered efficiency or no productivity at all as the result of their disabilities, we are forced to recognize the truth—we have been a wasteful nation and have done little toward conserving our man power.

With the wholesale human wastage of war came the nation's awakening. From the President, from statesmen, from recognized leaders in the medical profession, from great educators and from shrewd, broad-minded business men went forth promises and words of encouragement to the disabled soldiers and to those who were still sound but liable to suffer the wounds of war.

The "Nation's Draft of Honor," our President called it, in promising complete rehabilitation to all disabled soldiers, or solicitous and tender care to those rendered helpless. Our Medical Department promised restoration as nearly to the maximum as possible, and our educators promised vocational training and refitting

* Read before the Section on Orthopedic Surgery at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

for suitable employment for all who needed this service, while thousands of employers promised jobs to the disabled soldiers, promised them the opportunity to make good in spite of their handicaps.

Conceived at the high tide of patriotism, "reclaiming the disabled" stands forth as one of the greatest ideals born of this war. Even though jealousies and duplications of effort between various bureaus of the federal government have prevented a complete fulfilment of these promises to the soldiers, yet the ideal still lives and is growing. The work of repaying this, "Our Draft of Honor," to those who sacrificed so much for us should have been taken out of the realm of politics and bureaucracy. But the ideal itself has been spread broadcast throughout the nation. From the salvaging of disabled soldiers has sprung the vision of applying these principles to the civilian disabled—to the great casualty lists from industry.

From the intensive study of reclamation and rehabilitation during the last three years there has developed a form of medical economics which involves a great cooperative effort between medicine, education and industry. No longer can medicine be content with a medical or surgical end-result that does not combine with it a good economic end-result as well.

This cooperative effort makes a well rounded reclamation service, or a Service League for the Handicapped, as we designate such an organization founded in Chicago. Its work can be divided into five closely coordinated activities: (1) prevention; (2) adequate hospital, medical and surgical service, combined with suitable convalescent care; (3) vocational training; (4) placement or employment service, and (5) supervision or follow-up. It is only by a union of all the agencies in every community working along these different lines that will make possible a comprehensive reclamation service. Let us study each of these divisions in their relation to the whole.

PREVENTION

No reclamation service is complete that does not provide means for the reduction of the number of handicapped. The prevention of accidents and of occupational diseases in a number of large industrial concerns has fully demonstrated that disabilities can be reduced: In some concerns, by safety appliances, educational propaganda against accidents, and above all by a close cooperation between the industrial surgeon and the safety engineer, major accidents have been reduced more than 80 per cent.

But injuries and diseases contracted while away from the workshop—in the streets and in the homes—are still responsible for a great wastage in industry, a great slowing up of production. A broad-visioned reclamation service must take the lead in a nation-wide prevention program, in industry and out of industry, if it is to approach the ideal.

The success of this prevention program in a few industries of certain communities has depended on the reporting to the safety engineers of every accident case coming to the surgeon. In order to extend this accident prevention work to every employee in industry, and to the accidents in the homes and on the streets, it is necessary for every community to form a central agency which will receive these reports of accidents from the physicians and the hospitals. This agency must have a safety department which will then immediately investigate the cause of these accidents and map out plans for the prevention of their recurrence.

By cooperating with the National Safety Council, the Service League for the Handicapped in Chicago is endeavoring to develop just such a local safety movement. In time this voluntary effort will be taken over as a function of the state and of the city government, and the reporting of accidents and a study of their cause and their prevention will be a definite function of the state public health department. A similar effort is being made to have all occupational diseases and other preventable diseases that cause permanent disabilities reported, and an equal effort for their prevention will be instituted. This is as logical a function of the health department as the prevention of communicable diseases.

Industry is being robbed of millions of future workers by the neglect of the coming generation. Consider the lack of prenatal care for the majority of mothers-to-be of the laboring class. Prenatal clinics and infant welfare clinics in a few large cities have ably demonstrated their value. Such clinics should be established in every county of every state of the Union. Only in this way can the wastage from infant mortality be reduced.

Consider the lack of care and the lack of educational training of hundreds of thousands of children disabled by infantile paralysis, by bone and joint tuberculosis, by congenital defects and loss of members due to accidents. It is estimated that more than 50,000 schoolchildren in New York and more than 20,000 in Chicago are afflicted with heart disease. By proper medical care, physical development and muscle training combined with specialized educational training, fitting them for work which they can do efficiently without further injury to themselves, these crippled and disabled children can be made effective, productive units. Under present conditions, with our superficial medical examinations of schoolchildren and our lack of provisions for specialized training and supervised physical development, the great majority of these children will grow up to become noneffective. The results of the draft examinations prove the truth of this statement. As reconstruction physicians, it is our duty to save these children for future workers.

The agencies in every community working on the problems of prevention of tuberculoss, of blindness, of insanity, of social diseases, should all be coordinated under this central reclamation service in order that the greatest efficiency will be developed in the entire prevention movement.

Inadequate medical and surgical care has been responsible for an appalling number of permanently handicapped individuals. Preventive medicine and preventive surgery, therefore, involve careful study of every case in order to arrive at proper diagnosis; the treatment of every case as serious from the outset, and an effort to prevent prolonged disability and permanent deformities. Physicians who persist in treating fractures as sprains, who refuse to use the roentgen ray to diagnose conditions and to check up their results, who by careless methods, such as leaving the aftercare of their patients to untrained assistants, persist in turning out injured workmen with permanent handicaps—such physicians must be reeducated or in some way barred from the practice of medicine. Industry and insurance companies are pursuing a very short-sighted policy when they employ physicians who

have failed to make good in private practice and who are willing to accept a full-time position for $150 or $200 a month. These cheap, untrained men are responsible for too many permanently disabled workmen, as most state industrial compensation boards can truthfully verify. True, many good men are doing this work chiefly for experience; but these low salaries will not hold them long.

Prevention, therefore, is the very foundation of this reclamation service.

HOSPITAL, MEDICAL, SURGICAL AND CONVALESCENT SERVICE

As has often been said, the best hospital and medical service in every community is available for only the very poor, who receive it as charity, or for the well-to-do, who can buy it. Medical economics demands the same service for the working men and women and for their children, not as a charity but as a service within their reach. Every industrial surgeon knows that there is a constant wastage in industry due to the sick employee remaining at home under inadequate medical care because the diagnostic and treatment facilities of the hospital are beyond his financial ability to meet. This is the strongest argument for health insurance, and health insurance will come unless we as a profession solve this problem, for it must be met. Too long have we evaded its solution. A great number of moderate priced hospital beds is the only solution.

Few hospitals to day are adequately equipped to care for the serious accident cases from industry. Take, for example, fractured femur; experience in the war proved that the mobilization method of treatment, namely, by the Balkan frame and the Thomas splint with extension, gave as good healing results as the old plaster cast method, and gave from three to six weeks' quicker functional result by avoiding the stiff knee and hip joint that follow the latter method. But the equipment for this treatment is, as a rule, not available. How many times do we postpone needed roentgen ray examinations because the injured patient is in no condition to be moved to the roentgen ray laboratory? Or, if we move him, how often is damage done to the injured part? The portable roentgen-ray apparatus will solve this difficulty, but few hospitals have provided one for the use of surgeons.

Again, physiotherapy departments in the hospitals with facilities for baking stiffened joints or contracting scars, or facilities for hydrotherapy and massage given daily will prevent many permanent deformities and will hasten recovery. Has your hospital provided you with these facilities?

There is a dearth of hospital beds in almost every community. Patients are discharged to convalesce outside to make room for more acute cases. Or if they are retained in the hospital during a long stage of convalescence, they are often ruined by hospitalization. Frequently these patients have only a cheap boarding house or other wrong environment for this period of convalescence. The lack of proper care during this stage of recovery often causes a relapse with return to the hospital, with all the needless economic loss which such a system incurs.

A *convalescent center* in some favorable location in the community, equipped for physiotherapy, occupational therapy, and gradual physical development will return these chronic cases to industry more rapidly, and mentally and physically poised for effective service at once.

VOCATIONAL TRAINING

It is during this period of convalescence that many patients can be retrained for suitable employment in some specialized line when their disabilities prevent their return to the old job. To neglect this retraining process, this refitting for future usefulness, is to neglect the cure of the patient from an economic standpoint—to relegate him too often to the scrap heap.

The Service League for the Handicapped in Chicago has secured the cooperation of the public school board, certain night schools, the University of Chicago and a number of industrial concerns, especially the smaller industries, in this angle of their work. These agencies have already provided the means for the vocational training of a number of handicapped persons, and as the work extends it is bound to prove the feasibility of this union between medicine, education and industry.

In St. Luke's Hospital in Chicago we have developed an excellent occupational therapy department, and education along specialized lines to refit the handicapped patient for future usefulness is a definite part of the work of this department. The spreading of this hope of future usefulness to the patients in the wards by the medical staff, the nurses and the workers in occupational therapy has resulted in a cheerfulness and morale among the patients not often seen in a hospital.

PLACEMENT

The inability of handicapped individuals in the past to find suitable employment has forced these unfortunates down and down until begging or dependence on relatives or the county has been their only goal. The study of the psychology and the cause of beggars and of human parasites reveals that at first they fought against those forces which subtly and surely pushed them into the ranks of parasites. The lack of understanding of the handicapped by the able-bodied; the refusal of job after job or the exploitation of the disabled by certain employers who hired them for a pittance; the first appeal to the Associated Charities or the first act of beggary; the gradual loss of self-respect as this habit of begging or dependence, like a drug, grew upon them—these, and many other correctable factors contributed to and helped make up the hundreds of thousands of human derelicts who are now the nonproducers at this time when more and more production is the cry of the hour.

The proper placement of the handicapped workman therefore becomes one of the most important divisions in this reclamation service. It is estimated that approximately 90 per cent. of the men and women injured in industry can be returned to useful employment by a careful selection of their occupations. Only about 10 per cent. of these need vocational training, although practically all of them can have their earning ability greatly increased by vocational training. Much of this training can be given directly in industry.

FOLLOW-UP

Supervision both medically and vocationally must continue in all handicapped individuals in order that this reclamation process may be completed. This will prevent the drifting from job to job and the danger

of increasing their handicapped condition by changing to a hazardous type of work.

CONCLUSIONS

1. Industrial medicine and surgery has in a number of large industries demonstrated the practicability of a human maintenance department which conserves the working force and reclaims the disabled.

2. The work of reconstruction and rehabilitation of the disabled soldiers, while not completed, has developed and proved broad principles of reclaiming the handicapped.

3. The knowledge that more than three times as many men and women were being disabled in industry annually as were disabled in our entire army has awakened the nation's conscience to the need of rehabilitating these unfortunates and of preventing such a casualty list.

4. In different parts of the country, volunteer and governmental agencies are endeavoring to solve this problem.

5. A reclamation service to be complete must combine the efforts of medicine, education and industry. It must include the following services:

(*a*) Prevention of accidents and disease.

(*b*) Improved hospital, medical and surgical services. As an adjunct to these there must be provided better convalescent care.

(*c*) Vocational training of the handicapped when needed.

(*d*) Proper placement of the physically and mentally handicapped on jobs where they can be efficient with "safety to themselves, to their fellows and to property."

(*e*) Their continued supervision until assured that this reclamation service is completed in every instance.

6. By a broader conception of our duty to handicapped individuals, and by a closer cooperation with the various lay agencies, the medical profession can render a great service in conserving and reclaiming the nation's man power.

122 South Michigan Avenue.

ABSTRACT OF DISCUSSION

DR. ALBERT H. FREIBERG, Cincinnati: This country, particularly in its central part, is dotted with small industrial communities in which large numbers of men are working and sustaining precisely the same kind of injuries that are being sustained in the large cities where it is easily possible for a group of men to get together and plan for improvement in the condition of these unfortunate men. At the same time, unless the matter is taken in hand by the state in a broad general way, the problem cannot be solved in anything like a proper manner. In the state of Ohio, with which I am best acquainted, there are many such industrial communities, small towns in some cases and comparatively large towns in others, but up to this time there has been no real provision made for what we speak of as physiotherapy. There is on the part of the doctor no knowledge of the need for it. It should be the part of the industrial compensation commission to see that adequate provisions are made for handling these patients according to the demands of modern medicine and surgery. Even though the conditions in Chicago and New York and other large centers be improved, the great mass of the problem is not yet attacked. It is unfortunate that, in view of the large promises which were made for the plans of the surgeon general's office at the beginning of the war, so little has come to us from the medical department of the army that can be passed on to the general practitioner. It is unfortunate that the original plans for curative work shops, for physiotherapy and for a more comprehensive method of reconstruction of the injured individual for usefulness, were abandoned, and that the management of the patient in the sense of physiotherapy and occupational therapy should have been placed in the hands of a group of men who were not doctors at all, and who were more interested in making extended psychic tests of the patient to see what his future industrial activity might be than in the immediate and necessary improvement of his physical condition. As a matter of fact, in spite of papers read which tell just what physiotherapy offers and what occupational therapy is, there is not today, as far as I know, a means of pointing directly to any results which can be used to demonstrate to the medical profession what may be accomplished by these methods of treatment and what has been accomplished by them. The accomplishments are out of all proportion to the machinery which was there to use. The machinery was there but the engineers were lacking, or the engineers were present and they were not allowed to work. There is no use, I suppose, finding fault afterward, but we might as well call a spade a spade. The medical department of the army fell down utterly in this respect, and it is not entitled to any credit for any other result in this connection.

DR. JOHN T. O'FERRALL, New Orleans: Unquestionably one of the most important things to be done in every state is to make a survey of just how many cripples we have. I have been able to start a foundation for such a survey in Louisiana, and I hope it will prove to be of some avail. After such a survey is made we will have something tangible to put before our legislative bodies in order to encourage them to give us the means to work with, and this is particularly true in Louisiana. We have not the remotest idea how many cripples are in Louisiana or of what types, whether crippled children or crippled from industrial injury. We have absolutely no means of caring for crippled children other than giving them their first operative or corrective treatment. We have no way of giving them physiotherapy or hydrotherapy or whatever else might be needed. We have no way of giving them any educational aids. All of us have had come into our clinics adult cripples who have no education, on the contrary, are absolutely illiterate. They not only have the physical incapacity brought about through injury, but are mentally far below par. Therefore, a survey would be very beneficial in helping us to get something from our legislatures with which to work out this problem. I thoroughly agree with Dr. Mock as to the inadvisability of the compensation insurance commission employing men who are below par surgically, and who certainly have not the orthopedic viewpoint, in charge of their cases. Unfortunately, New Orleans is, in my opinion, overloaded with free clinics, and every day we see coming into our clinic for treatment compensation cases which have in many instances been treated for months by industrial surgeons, many of them incompetent men. These patients are receiving compensation in sufficient amount to pay for the services of a competent doctor. Many times they are not allowed by their compensation physicians to seek the services of other physicians, despite the fact that the insurance company is obligated to see that they receive the best treatment.

DR. FRANK G. MURPHY, Chicago: The compensation laws of the various states place the burden of the rehabilitation of these industrial cripples on the industries. Not all of the industries are as enthusiastic about rehabilitation of the industrially crippled as might be supposed. They know that by law each industrial cripple can secure from them a certain amount for a specified injury, and they are therefore inclined to pay this sum and be through with the case, instead of instituting the appropriate rehabilitation treatment. In the recent war many soldiers were crippled, and the government has done much to rehabilitate and reeducate them; but when we consider that during each year for the last fifty years the industries of this country have produced more cripples than the world war has brought about among American soldiers, and when we further consider how little has been done for these industrial cripples by way of federal appropriations, we are startled. For the fiscal year ending June 30, 1920, Congress appropriated $500,000 for the rehabilitation of the industrial cripples of the United States, each state to receive such

proportion of this amount as its population bears to the total population of the United States. For the year ending June 30, 1921, $750,000 has been appropriated, and for the year ending June 30, 1923, $1,000,000. For all the industrial cripples of the United States this amount is not a drop in the bucket; in fact, it would not be sufficient for rehabilitation and reeducation in even one community.

Dr. H. Winnett Orr, Lincoln, Neb.: While we are criticizing those responsible for the breakdown of the program in the medical department of the U. S. Army, there is one individual who ought not to be overlooked, and that is the soldier himself. It has been found that one of the great faults of this whole program, especially with the British, is that we do not have a receptive individual, and that is one reason why we should emphasize the importance of taking care of these cripples when young. One service in the U. S. Government has done creditable work, and that is the reclamation service of the Forestry Department. They do not to any extent devote themselves to the problem of saving the old trees that are broken down; they plant new ones.

Dr. Clarence W. East, Springfield, Ill.: In Illinois a plan has been followed for more than three years for the purpose of retrieving as far as possible the results of epidemic poliomyelitis. We began the work by giving demonstration clinics before medical societies in thirty centers showing the early after-care of these cases. We were immediately urged to follow up this work, and we have twenty-four permanent field clinics for the special purpose of caring for this class of patients. Each year we are taking care of about 1,600 cripples, 70 per cent. of whom represent early, or recent, cases of poliomyelitis. We have established these clinics in this way: The county medical or local medical societies in each case have endorsed the movement and have really invited us to come into their field. We have also met with the local nurses, sometimes with the civic bodies and in one county with the board of supervisors. With a force of two doctors and four field nurses we have tried at least to supervise the carrying out of the recommendations that have been made in the clinics, and with the rallying of public health nurses and the support of interested people we have been able to do quite a comprehensive work in this respect. One of the most recent and significant signs which should tend to encourage us in our efforts is the interest in the movement that is beginning to be manifested by men interested in orthopedics in the various communities. It has been found that in a large number of cases we are able to prevent at least the more serious results of poliomyelitis. The best results achieved from the kindly interest of the profession in our work is the dragging of this class of patients out of the claws and maws of the quacks all over Illinois.

Dr. J. D. Griffith, Kansas City, Mo.: If this great body of medical men could be united in this country we could do anything we wanted to with Congress. There is not a county in this whole country whose county medical organization could not put a representative into the legislature of that state; there is not a district that could not put a congressman in Washington. One hundred and fifty thousand men who absolutely have the hold on the people that you have, a greater hold than has the minister of the gospel or anybody else, can influence each county and do what they please in the shape of rehabilitation. Unity is what you want.

Dr. William Colby Rucker, Washington, D. C.: This movement is a recognition of the principle that a man who is a nonproducer from any cause whatsoever is a menace to the health of the nation.

Dr. Paul B. Magnuson, Chicago: Since we have compensation laws we have a way by which we may get decent treatment in industry, if we have somebody at the head of the industrial commissions who has enough nerve to put it over. He will make himself very unpopular, but it can be done. In Illinois we have a law which provides that the compensation board can sustain the right of any insurance company to write compensation, so when we find that a man gets bad results repeatedly, shows poor surgical judgment repeatedly, and gets into trouble repeatedly with the board, we send for him and tell him that if this thing goes on we will have to request the companies doing business with him to discontinue writing insurance in Illinois. That is pretty severe medicine and probably would not have to be applied in many cases. The reason we do not get decent treatment in many cases is that most of these men are better business men than they are doctors; they take more interest in the business side, and that appeals to insurance people. The trouble with most efficient and scientific medical men is that they pay attention to the patient and not to the business side of the case, whereas the business-like doctor attends to the business aspects of the case and does not pay much attention to the patient. If we can manage things so that the patient will have proper attention in a first-class institution, and then have the man who is competent to give surgical care also furbish his business ability, we will be able to secure for industrial patients much more efficient treatment. We are starting to publish in the International Clinics every three months a series of cases from the industrial clinics of Illinois, in each case giving the history, criticizing it favorably or unfavorably as to the result, pointing out where the mistakes were made, if any, and wherein the measures adopted were carried out properly, if so carried out, and at the end pointing out in dollars and cents what it has cost. And in this we are not trying to cut down the doctor's bill. That is the only way you can talk to a business man because he is in business to make money.

Dr. J. S. Millard, Akron, Ohio: I am in charge of the medical and surgical work of the Goodyear Tire & Rubber Company, and I thought it might interest you to know how we are taking care of our injured employees. The Goodyear Company employs about 25,000 men. They have maintained a hospital since 1912 and now have two hospitals with about twenty-five beds available. We do not keep sick persons there at all, only surgical cases. We have a real physiotherapy department and a well equipped roentgen-ray department so that we can take care of all our severe injuries and fracture cases immediately. Every large industrial institution should maintain a hospital located in the plant.

Dr. Walter G. Stern, Cleveland: In the survey of cripples made in Cleveland in 1916 (I always speak of it as "the survey of sainted memory"), a résumé of which was buried in the *Journal* of the American Orthopedic Association two years ago, we found that the figures which have been given today were approximately true, and that 50 per cent. of all the cripples that we enumerated received their injuries between the ages of 15 and 45 years—that is, during the working age. So that approximately 50 per cent. of all the disabilities we found were those the cause of which can be found in childhood, and 50 per cent. occur during the working age. I have lived through a couple of surveys and they are usually not worth the paper they are printed on, because by the time the figures are tabulated and everybody satisfied and all pet theories that you would have liked to put in them are removed by those on whose toes you might be treading, your survey has been hopelessly emasculated. If we want to do anything constructive, you must do two things: First, educate the physicians, and here Dr. Magnuson's method would be appropriate. The only hope for the future lies in the coming generation of physicians. I do not think the teaching of the principles of casualty surgery is at present resting in the hands of the orthopedist who sees the thing clearly, but is resting in the hands of the general surgeon who looks at things far differently from us. Even the present generation of physicians coming out in the last five years, except those who have been through military service, does not appreciate the principles underlying the treatment of trauma, the diagnosis and treatment of fractures or of tendon wounds; they know nothing and care very little about the underlying principles that guide the orthopedic surgeon in his line of work. The second factor lies in securing the aid and cooperation of the labor unions. The injured workman's most dangerous enemy is a fellow workman who is strong in limb if not entirely sound in his principles. In the first place, when a man gets back to work and is evidently handicapped, he is jeered at and called a "crip." He is given the disagreeable jobs, and through the taunts and jeers of fellow workmen often falls down on his job. But the worst thing is that the crippled workingman is usually unable to earn the union workmen's wage, and if not,

the employer cannot afford to keep him in his service at the union wage rate. In one instance, the labor unions insisted that the employer would have to pay such men the regular wage or they would strike. He could not afford to do so, and he had to discharge two crippled men. If you ever can get the labor unions interested they will be able to dictate to the legislatures and industrial commissions just what they want. The law in Illinois certainly has made for good. The laws in some of the states have not been worded so that they can do the greatest amount of good. The industrial commissions seem usually to be imbued with the idea that they should get medical work done as cheaply as possible; hence they do not seek the best medical and surgical aid. In many communities the hospitals and surgeons are not properly equipped for the work, especially the smaller hospitals in the large communities; consequently these are chosen to do this work because they will do it cheaply. As to state health insurance, if this is going to be conducted on the parsimonious plan hitherto followed by the industrial commissions in most states, God pity all those mixed up with it, including the patients.

DR. HARRY E. MOCK, Chicago: I desire to call the attention of my friends in Louisiana to the fact that the doctor described by Dr. O'Ferrall was the old-fashioned company "Doc," and not an industrial surgeon as we conceive him today. We do not want him classified with the industrial surgeons. I agree with Dr. Freiburg that the formation of a service league or reclamation service in one community seems to touch only the edges of the problem. I am profiting from the experience gained in being one of the early men who developed industrial medicine. We have to begin in a small way. We must demonstrate its value in one, two, three or four industries, and then we shall make progress. The reclamation service must be demonstrated in different communities all over this country in order to bring about the broad conception of reclamation which has been visioned here today. In Illinois a law was passed for the rehabilitation of the disabled from industry. Similar laws have been passed in Pennsylvania, Rhode Island, New Jersey, California and other states. In Illinois I was one of the few who wrote to the governor of the state and asked that the rehabilitation act be not passed, or, if passed, that it be limited in its scope to the appointment of a commission to draw up a broad plan of what rehabilitation of the industrially disabled really meant. I did this because when the Smith-Hughes bill, which Dr. Murphy referred to, was up for hearing it impressed me as being "piecemeal" legislation. The evidence before that committee of the senate and house dealt only with vocational training of the injured, just about 10 per cent. of the job. In the army we passed through some of the things brought out as to how far the rehabilitation act had failed in its purpose, simply because vocational training in some hospitals became so great a feature that we could not see the other big problems of the reclamation service. So if those states which have passed the rehabilitation act devote their time only to the reeducation of the disabled, they are liable to meet with the same disappointments which we suffered in the army. In Illinois we have an appropriation of $10,000, and they have employed a good man to get in touch with the leaders of the state for the purpose of mapping out a program for the reclamation service which the state will apply a year hence. At first his idea was that a survey of cripples was the thing he was appointed for. However, his viewpoint has broadened and he has grasped this: The thing he must do is to prepare a program which the state can adopt and which involves the coordination in the state of all those agencies looking toward the reclamation of disabled men. And what are those agencies? We have set up in Chicago a little laboratory to prove what they are: Here is a tuberculosis group which aims to show what will happen as the result of proper care and training; here is the group fighting for the reeducation of the blind; another group is fighting for the prevention of blindness in the state; the industrial surgeons are working along lines of reclaiming the disabled and getting them back on the job. Then let the medical profession do just what Dr. Griffith suggested: Unite in one big union for the reclamation of all disabled men, and we will have every state and community in the nation falling into line behind this movement.

THE CAUSES AND OCCURRENCE OF FUNCTIONAL SCOLIOSIS IN COLLEGE MEN *

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In my capacity of consulting physician to Lehigh University, I have had the opportunity to take part in the physical examination of the entering freshman class each fall from 1912 to 1919, with the exception of 1918. Early in the routine procedure, I was struck by the surprising frequency with which a mild type of functional scoliosis was found. The men exhibiting scoliosis were consequently subjected to a more detailed examination with a view to determine the underlying causes. This has now been pursued for seven years, in which period a total of 1,856 men has been observed.

Functional scoliosis is held to be that form of lateral curvature of the spine in which no permanent bony change is apparent and which disappears with recumbency, i. e., on lying down. Two or three cases each year have shown structural curves, i. e., scoliosis that persists with recumbency. The functional scoliosis under discussion has been of a very mild type, the greatest deviation from the median line varying from 0.5 to 2 cm.

TABLE 1.—FREQUENCY OF SCOLIOSIS IN YOUTHS FROM 16 TO 20

Year	Per Cent.	Comment
1912	10.4	First examined by the physical director and scoliosis cases referred to the medical examiner
1913	11.8	
1914	9.5	
1915	11.6	
1916	11.8	
1917*	43.6	War-time—relative increase of unfit
1919*	21.2	

* All students examined by medical examiner.

The procedure of examination has been:

1. Routine physical examination. Those men exhibiting scoliosis were culled out and searched for obvious causes of the scoliosis, such as flatfoot, empyema drainage scars, defective vision, congenital deformities, and bone disease of the extremities, and questioned as to their previous occupation—military training, surveyor carrying a transit, etc.

2. Notation of the relative position of the shoulders and hips.

3. Determination whether the scoliosis disappears: (*a*) with support under foot; (*b*) on lying down.

4. Measurement of the lower extremities. The patient is placed prone on his back so that the line joining the anterior superior spines of the ilia is at right angles to the median line of the body. Any apparent difference in the length of the lower extremities, as shown by the difference in the level of the internal malleoli at the ankles, is noted. Also:

A. The distance from the anterior superior spine to the internal malleolus of each side is recorded.

B. The distance from the greater trochanter to the external malleolus is similarly measured.

C. The length of Bryant's line is determined.

It has been surprising to find that, instead of being an occasional isolated anomaly, scoliosis occurs with relative frequency in youths of 16 to 20 years of age.

* Read before the Section on Orthopedic Surgery at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

As all statistics of functional scolioses have shown heretofore, the most frequent curve is a long left lateral scoliosis; as high as 90 per cent. *left* curves have been reported in children.[1] The incidence of occurrence in these boys of college age has been recorded in Table 2.

TABLE 2.—COMPARATIVE FREQUENCY OF LEFT, RIGHT AND BILATERAL SCOLIOSIS

Year	Left, per Cent.	Right, per Cent.	Right and Left, per Cent.
1912	58.0	40.0	2.0
1913	84.0	4.0	12.0
1914	75.0	0.0	25.0
1915	70.0	3.7	26.3
1916	70.6	11.8	17.6
1917	63.0	11.3	25.7
1919	68.1	17.6	14.3

The causes of scoliosis have been classified by Lovett as:

A. Congenital scoliosis, i. e., malformation of spine, scapula or thorax.

B. Acquired scoliosis:

1. Anatomic:
   - (*a*) Torticollis.
   - (*b*) Pelvic asymmetry.
   - (*c*) Pelvic obliquity.
   - (*d*) Unequal vision.
   - (*e*) Unequal hearing.

2. Pathologic affection of vertebrae—as rickets, Pott's disease.
3. Pathologic affection of extremities.
4. Disease of soft parts—infantile paralysis, empyema, etc.
5. Occupational or habit.

On the basis of this classification, examination gave the results recorded in Table 3.

For the first five years, cases of scoliosis found during the routine physical examinations were referred for detailed study. In the last two examinations, the entire class has passed before the medical adviser. This accounts possibly for the higher incidence of scoliosis in the last two recorded years.

TABLE 3.—RESULTS ON BASIS OF LOVETT'S CLASSIFICATION

	1912 %	1913 %	1914 %	1915 %	1916 %	1917 %	1919 %
Congenital scoliosis	0	0	0	0	0	1.8	0
Acquired scoliosis: Anatomic:							
Pelvic asymmetry	0	0	0	0	0	2.7	6.6
Femoral inequality:							
Bryant's line short	26.3*	12.0	25.0	11.6	14.7	20.0	10.0
Shaft short	26.3*	36.0	25.0	16.0	14.7	21.6	33.3
Both Bryant's line and shaft short	0	0	0	0	3.0	6.1	11.0
Pathologic affection of vertebrae	0	0	0	0	0	0	0
Pathologic affection of extremities:							
Flatfoot	0	20.0	25.0	30.1	41.0	23.5	11.0
Disease of hip or knee	0	4.0	0	0	6.0	0	1.1
Disease of soft parts	0	0	0	0	3.0	0	0
Occupational	0	28.0	25.0	42.3	17.6	24.3	27.0

* Records incomplete; classification can be made only partially.

The variation in the percentages for the various causes of scoliosis is to be noted. No constant incidence of any type is apparent except that the total number showing some shortening by measurement, whether it be shaft, Bryant's line, or both, is fairly constant—about 50 per cent. of the total scoliotic.

Table 3 may perhaps be best studied in a condensed form (Table 4).

1. Lovett: Lateral Curvature of the Spine, Philadelphia, P. Blakiston's Son & Co.; Tr. Inter. Cong. Med., 1913, Sub-Section VII-A, Orthop., p. 33.

In pure functional scoliosis, pathologic affections of the extremities or of the spine or pelvis are rarely concerned, as they are usually accompanied by habitual or structural curves. Asymmetry of the pelvis, and cases of mild, unilateral atrophy and deformity from an old infantile paralysis form the chief components of the miscellaneous group.

Flatfoot is solely responsible for a considerable percentage of these scolioses, but is implicated in many in which other factors are also concerned. Apparently one fifth to one quarter of all cases of flatfoot produce, or are associated with, scoliosis.

A great many curves have been classified as occupational in which no definite etiologic factor could be determined, though many gave a direct history of right-shoulder weight-bearing, i. e., transit or gun. They were regarded as probably developmental in origin and as the result, possibly, of improper seating in school. The likelihood of a mild congenital curve in some of these must be considered.

That group especially merits consideration, however, which is associated with a shorter Bryant's line, or shorter trochanter-to-external malleolus measurement, which has been recorded above as exhibiting femoral inequality.

TABLE 4.—ETIOLOGY

	1912 %	1913 %	1914 %	1915 %	1916 %	1917 %	1919 %
Femoral inequality:							
Bryant's line short	26.3	12.0	25.0	11.6	14.7	20.0	10.0
Shaft short	26.3	36.0	25.0	16.0	14.7	21.6	33.3
Both Bryant's line and shaft short	0	0	0	0	3.0	6.1	11.0
Occupational	0	28.0	25.0	42.3	17.6	24.3	28.0
Flatfoot	0	20.0	25.0	30.1	41.0	23.5	11.0
Miscellaneous	0	4.0	0	0	9.0	4.5	7.0

SHORTENING OF BRYANT'S LINE

The shortening of Bryant's line may be due to:

1. Congenital dislocation of the hip—very mild type.
2. Acetabulum placed slightly higher on the shorter side.
3. Coxa vara from an old fracture of the neck of the femur.
4. Simple coxa vara of a very slight form.
5. A congenital, relatively more acute angle at which the neck of the femur joins the shaft, or simply a shorter neck—congenital coxa vara.

When this shortening was first discovered, it was attributed to a possible very slight dorsal dislocation of the hip, or an acetabulum slightly higher placed. In one or two cases, there has been sufficient promjnence of the trochanter and deformity at the hip to suspect a partial dorsal upward dislocation of the hip; but in the absence of roentgenograms and with lack of impairment of function, in no case has this been proved. The difference as determined is rarely more than 1 cm., and is usually less. It seemed more likely that the difference between the two sides in the angle with which the neck of the femur joins the shaft would be sufficient to account for the slight difference in measurement. A slightly more acute angle on one side, a tendency as it were to coxa vara, would raise the height of the greater trochanter with respect to the opposite side, and would account for a shorter Bryant's line, and also a shorter lower extremity on that side, as demonstrated by the anterosuperior spine-to-internal malleolus measurement.

In none of these cases were there any symptoms referable to the scolioses, the hips or extremities, or history of trauma. The patients were all quite ignorant

of their deformity and unconscious of any postural abnormality. There was no restricted movement of any sort at the hips. The question as to whether the coxa vara of mild type—which, it seems reasonable to believe, accounts for the Bryant's line shortening—is congenital or acquired may be briefly considered. Roberts [2] has shown the variability of the femora of the same individual, which lends support to the congenital origin of this condition. On the other hand, many of these individuals are physically underdeveloped and have the earmarks of former rickets, Harrison's grooves, etc. Brown [3] has shown the high incidence of previous disease in college men exhibiting scoliosis. Hence, an acquired coxa vara, such as might result from the bending of a weak femoral neck by the rapid increase of weight-bearing in adolescence, seems more than a remote possibility. It has been impracticable to obtain roentgenograms of these men; the light that these might shed is thus denied.

SHORTENING IN GREATER TROCHANTER TO EXTERNAL MALLEOLUS LINE

Shortening in the greater trochanter to external malleolus line may be due to:

1. Shortening of the femoral shaft.
2. Shortening or excessive bowing of one tibia.
3. Shortening in both femur and tibia.
4. Unusual size or development of one trochanter.

The slight difference in length, and consequently in measurements, of the two femora and tibiae in the same individual has been recorded by Roberts. The frequency with which a shorter femoral shaft is responsible, in these cases, for the difference in measurements is probably high. In two of seven cases examined by Roberts, no shortening of the tibia was found. In twenty cases, in which control measurements from the anterosuperior spine to the upper margin of the patella were taken, in our series, a shortening for this distance was demonstrated. Measurements of the length of the tibia are very difficult to make accurately. In a few cases in which control observations were made on the length of the tibia, by measuring from the external intercondylar fissure at the knee to the external malleolus, no difference on the two sides was demonstrable. It seems fair to consider the femur largely at fault, though the tibia cannot be ruled out in every instance, and there are, unquestionably, cases in which both tibia and femur are short.

It cannot be denied that measurement from the trochanter to the external malleolus is exceedingly difficult to make accurately, and that an asymmetrical enlargement of the trochanter could influence this measurement, to indicate shortening when none is present. A few cases of unequal measurement may be accounted for in this wise.

SHORTENING OF THE TWO IN THE SAME INDIVIDUAL

When shortening of both Bryant's line and the trochanter to external malleolus in the same individual is observed on the same side, it is reasonable to suppose that both the angle of the neck with the shaft is more acute, and that the length of the femoral or tibial shafts is shorter on the shorter measured side.

Similarly, it is conceivable that a sharper angle of the neck may exist on one side and a shorter shaft on the other.

A short lower extremity has long been recognized as a cause of scoliosis, but I have been unable to find that attention has been directed to the difference in the femora, especially a shortening of Bryant's line, as an explanation for this type of functional scoliosis. To eliminate the occurrence of difference in measurements with scoliosis as a mere coincidence, a number of individuals without scoliosis were measured to ascertain if difference in lower extremity measurements could be detected. In a short series of twenty-five, no apparent difference and no measurable difference could be found.

The 137 cases of short shaft or more acute-angled femoral neck were further analyzed:

One hundred and seven, or 78.1 per cent., showed definite obliteration of the scoliosis by support under the foot of the side which seemed short as indicated by the apparent difference and measurement. As there has been noted a marked preponderance of left-sided scoliosis, so there is as great preponderance of short left femurs. Likewise, there was found to be a definite relationship between the scoliosis and the short side, the curve being always toward the short side with but seventeen exceptions. Seventeen left curves were associated with eleven short right shafts and six right coxa vara necks.

In thirty, or 21.9 per cent., the scoliosis did not disappear with a support under the foot, but did disappear on lying down; of these, seven had an asymmetrical pelvis, and six, flatfoot.

In twenty cases, or 14.6 per cent., flatfoot was found; in seven, this apparently changed the curve to the unexpected side; i. e., left flatfoot with a right short lower extremity produced a left scoliosis, when a right scoliosis is usual with a right short leg.

The high incidence, almost four out of every five, in which the apparent difference and shortening by measurement and the curve expected coincide, and in which, moreover, the scoliosis disappears with support under the foot of the short side, seems convincing that the shortening in the extremity plays the major rôle in the cause of that scoliosis. But there is a small group in which the shortening appears to bear no definite relationship to the scoliosis. Other congenital anomalies—asymmetrical pelvis, and flatfoot, and contralateral shortening of the neck and shaft—are apparently conditions that complicate the picture and nullify any influence the shortening might have.

THERAPEUTIC MEASURES

So far, at Lehigh, it has been difficult to inaugurate any systematic curative measures for these boys with scoliosis. For those with occupational or flatfoot curves, exercises designed to correct the scolioses and strengthen the proper leg muscles are demonstrated, and emphasis is laid on the necessity for daily carrying out of these instructions. They are required to take the regular gymnasium setting-up drill, but so far no special classes have been inaugurated in which these exercises may be taught and supervised. Those with short extremities are urged to wear a small pad under the heel in their shoe, but few apparently follow this advice for more than a month or two.

It has been impossible, with our small staff of instructors and the increasing size of the classes, to check up on the results in these cases—to ascertain whether those curves persist or are really corrected. A very small group, approximately twenty men, have

2. Roberts, J. B.: Philadelphia Med. Times **8**: 510 (Aug. 3) 1878.
3. Brown, L. F. T.: Am. J. Orthop. Surg. **15**: 774 (Nov.) 1917.

been seen in their senior year—after three years—and in all of them the curve remained the same.

Whether these curves are of serious portent is quite open to question, though, with the passing of years, the possibility of change to a structural scoliosis cannot be completely ignored.

CONCLUSION

Functional scoliosis has been shown to occur in from 10 to 20 per cent. of the men of college age, the left-sided curve predominating (70 per cent.). This scoliosis results chiefly from flatfoot, occupational or developmental peculiarities, and from shortening in one lower extremity. This shortening may exist in Bryant's line, or in a trochanter to external malleolus measurement. A mild coxa vara, and variation in length of the femoral, and sometimes the tibial shaft, have been suggested as the most likely explanation of this shortening.[4]

ABSTRACT OF DISCUSSION

Dr. Edwin W. Ryerson, Chicago: I have not had opportunity to examine very many men of college age. I have, however, had the opportunity of examining with a great deal of care a large proportion of the men of the Eighty-Ninth and Tenth divisions of the U. S. Army. The incidence of scoliosis was extremely high, and it was very surprising to me. In many cases we were able to find some definite cause; in others we were not. We had the advantage of being able to make roentgenograms in cases not to be diagnosed by other means, and it is to be regretted that Dr. Estes did not have a systematic roentgen-ray examination made in the cases under discussion. I should hardly consider that there was very much to discuss in cases in which there was a definite asymmetry in the limbs or a definite congenital anomaly of the vertebrae to account for the scoliosis present, for those conditions are obvious. But there are cases which do not show these abnormalities and in which more careful examination of the legs do not reveal the inequalities mentioned, in which no asymmetries can be detected. These are merely habit postures. One explanation of the very frequent inequality in the legs is that most people do not stand equally on both legs, but all throw the weight to one side or the other. This may have some influence on the growth of the bone. I do not believe that it can have any effect in bringing about this condition in the presence of ordinary nutrition; in the rachitic, however, bending of the neck of the femur may be caused in that way. I suggest that for the betterment of the race universal compulsory military training is the greatest thing for our young men, and I hope the bill providing for this will go through the Senate and House of Representatives.

Dr. Melvin S. Henderson, Rochester, Minn.: I have frequently seen scoliosis in young girls and women. We found the cause in some cases. Of course, in nonsyphilitic cases it is not very important whether anything is done. I have not realized, however, that scoliosis is so prevalent in young men as has been pointed out by Dr. Estes and Dr. Ryerson. The patients I have seen were young girls and women.

Dr. Harry M. Sherman, San Francisco: Dr. Estes' paper refers to pure asymmetry rather than to scoliosis. The scoliotic element is secondary to the question of inequality in the length of the legs. The length of the legs is part and parcel of that variation which exists all through animal life. We are not exemplars of bilateral symmetry, but of bilateral asymmetry. Bilateral asymmetry or variation is what makes for evolution. Evolution does not come because of the similarity of the different individuals of a given species, but because of dissimilarity. Each one of us is a unique individual, and can never be duplicated in every detail. The problem presented by Dr. Estes has carried us into the realms of biology and of evolution. It is part of these subjects.

Dr. William L. Estes, Jr., South Bethlehem, Pa.: The paper is really a review rather than a contribution of special interest to this section.

4. In addition to the references already given, the following will be found of interest:
Bradford and Lovett: Orthopedic Surgey.
Emslie: Tr. Inter. Cong. Med., 1913, Sub-Section VII A, Orthop., p. 41.
Serra: Chir. d'Org. di Movimento **1**: 380, 1917.
Savariaud: Méd. inf. **11**: 121, 1914.

THE MELTZER-LYON METHOD IN THE DIAGNOSIS OF INFECTIONS OF THE BILIARY TRACT*

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In 1918, Meltzer[1] made the interesting observation that a 25 per cent. solution of magnesium sulphate, applied to the duodenal mucosa, caused a relaxation of the sphincter of the duodenal outlet of the common duct, with possible contraction of the gallbladder musculature. Lyon applied this observation in a practical manner. Thereby a contribution of great value was made to our methods for diagnosing diseases of the biliary tract.

The method of application is very simple and thus its value is greatly enhanced. Lyon has described the method,[2] but further amplification is desirable. In our clinic we employ the following procedure: After a meal of shredded wheat biscuit and 10 ounces of water, we introduce the Rehfuss stomach tube, and gastric specimens are extracted every fifteen minutes until no food particles are seen. Then we have the patient turn on the right side with the left knee flexed over the right, thus depressing the duodenum to a lower level and facilitating the entrance of the bulb into the duodenum. Usually this takes from ten minutes to an hour and its passage is detected in several ways:

1. By the change in reaction of the aspirated fluid when the gastric juice is acid.

2. By the character of the duodenal juice—usually pearly fluid, limpid, alkaline, with floccules suspended in the fluid. Bile may be present.

3. By the presence of a slight tug, detected by gently pulling the tube.

4. By roentgen-ray examination showing that the bulb is past the pylorus.

Early in this work, we had considerable difficulty in feeling certain that the bulb was through the pylorus, and in the first fifty cases we employed the fluoroscope as a check.

There are certain difficulties that will be encountered, however. In a small group of our cases, we could not secure the passage of the bulb through the pylorus at the first trial, and in several cases as many as three trials were necessary. In a few instances, by direct fluoroscopic palpation we pushed the bulb through the pylorus. At times, the patient may become nervous and irritable; and after a reasonable wait of at least an hour, we have waited a day and repeated the attempt. In every case, with the exception of one of pyloric stenosis, this was successful after the third attempt. Allowing the patient to get up and walk around, changing the position, and giving drinks of broth or water, have also facilitated the passage in many instances. During the last eight months we have

* Read before the Montana State Medical Meeting, Helena, Mont., July 14, 1920.
1. Meltzer, S. J.: Am. J. M. Sc. **153**: 469 (April) 1918.
2. Lyon, B. B. V.: Diagnosis and Treatment of Diseases of the Gallbladder and Biliary Ducts, J. A. M. A. **73**: 980 (Sept. 27) 1919.

applied this procedure in 125 cases (totaling more than 200 observations), these being cases of suspected or of frank gallbladder disease. The majority have been women, many nervous and irritable; but in no case has the tube been refused, and many have willingly returned for further drainage when this was advised as a therapeutic measure.

This method of diagnosis of biliary tract disease has several phases of usefulness. I will not attempt to touch its field in the treatment of biliary tract infections, though I believe that this method will modify our present-day conception of medical treatment of cholecystitis and catarrhal jaundice.

In considering the application of the method in diagnoses of biliary tract disease, it is of prime importance to know the normal appearance and constituents of normal bile anl normal duodenal juice.

The normal duodenal junce is alkaline in reaction, and is a pearly fluid, with viscosity less than that of the gastric juice. Floccules are seen suspended in this fluid. On microscopic examination, a few micro-organisms are seen, and a very few cellular elements.

In pathologic conditions in which the duodenum is involved as a part of the infection, the duodenal fluid is turbid and is loaded with micro-organisms, with an increase of mucus; a bile admixture is frequently found. The pathologic picture presents various degrees of difference from the normal.

After being assured that the bulb is in the duodenum, we slowly inject 50 c.c. of sterile magnesium sulphate solution. This is injected warm, by means of a 50 c.c. syringe. After a few minutes, a light yellow bile appears in the syringe, gentle suction having been employed. We then disconnect the syringe and allow the tube to hang over the side of the bed, draining by gravity. The first bile appearing is an admixture of duodenal fluid, common bile, duct bile and magnesium sulphate solution. We usually withdraw most of the magnesium sulphate solution after douching the duodenal mucosa. After a variable period of from ten to thirty minutes, the bile becomes darker in color and more viscid. This is the gallbladder bile and is collected in separate sterile tubes for study. The amount varies from 25 to 75 c.c. When there is an excess of 80 c.c., we consider the gallbladder as presenting the condition of stasis. Finally the bile becomes lighter in color, a clear light yellow, less syrupy, and this is the liver bile, which may continue flowing for an indefinite period. The common duct bile is usually small in amount and clear (with perhaps a trace of mucus). The normal gallbladder bile varies from a deep golden yellow to a dark maple brown; it is moderately viscid, dropping easily in short lengths from a 1 c.c. pipet; it is clear. Small traces of mucus may be seen in apparently normal gallbladder bile, but this must be viewed with suspicion. Its reaction is neutral or faintly alkaline. Its specific gravity varies from 1.015 to 1.030; this may be increased to 1.035 in cases of biliary stasis and infections. Liver bile is thinner, and the specific gravity varies from 1.008 to 1.010.

On microscopic examination, the normal gallbladder bile shows a few epithelial cells, one or two leukocytes to a low power field, bile crystals and traces of mucus. A few bacteria are seen as contamination of duodenal contents. It is important, in the pursuit of this work, to have examined a large number of normal cases, for a proper understanding of normal findings aids greatly in interpreting diseased conditions.

Study of the abnormal bile presents several difficulties, but the positive findings obtainable permit a considerable diagnostic value to be attached to this method. It is as yet too recent a procedure, to know fully its possibilities, but a certain number of definite results have been obtained. We attempt to study the bile from several different angles, and future work along these lines will elucidate many interesting problems which now confront us. My work has been elementary, and because of lack of time and trained help, accurate bacteriologic and chemical analyses have been meager.

We have studied the aspirated bile according to:

1. *Gross Appearance.*—Color; viscosity; turbidity (which varies from a heavy, thick cloud to a very thin turbidity); clarity (which varies from a sparkling clear bile to a clear liquid in which are suspended flakes or clumps of mucus); presence of gritty sand.

2. *Microscopic Appearance.*—Cellular elements (as type and number of epithelial cells); presence of bacteria (whether loaded with bacteria or having many bacteria enmeshed in mucus); crystals; leukocytes and their approximate number.

3. *Bacteriology.*—Two cultures are taken of every specimen, in broth and nutrient agar.

I have had the opportunity of using this method in 125 cases (totaling more than 200 observations), thirty-three of the cases coming to operation. All of these were either suspected or clear-cut examples of gallbladder disease. They included:

Twenty-four cases of cholelithiasis, either verified operatively or else "textbook" cases including empyema cases.

Eleven cases of cholecystitis, verified at operation.

Four cases of obstructive jaundice due to stone or malignancy, involving the common duct, verified at operation or necropsy.

Twenty-two cases in which we made the diagnosis of cholecystitis, by clinical, roentgenologic and laboratory studies.

As a result of this work, we feel justified in drawing these conclusions as to the interpretation of the aspirated gallbladder bile:

1. A markedly gallbladder bile, with increased viscosity, which on microscopic examination shows the fluid to be swarming with micro-organisms, the presence of mucus and an increase of cellular elements, is pathognomonic of acute cholecystitis. When the leukocytes show great increase and are of the polymorphonuclear variety, the infection is of the suppurative type, or empyema is present. Cultures usually show staphylococci, streptococci or the colon typhoid bacilli, named in the order of their frequency as we have found them. At operation, we have found many of these cases to be acute exacerbations of a chronic cholecystitis.

2. A clear gallbladder bile, with increased viscosity and suspended flakes of mucus (which on microscopic examination are shown to be enmeshed with bacteria), a slight increase of leukocytes, from 6 to 15 (low power field), is highly suggestive of subacute or chronic cholecystitis. Positive cultures are usually obtained.

3. A clear, brilliant gallbladder bile, with normal or increased viscosity and usually sterile cultures, may be found in many of the cases of chronic cholecystitis, especially the "stone" group, or in absolutely normal gallbladders.

4. When repeated attempts to obtain the gallbladder bile are unsuccessful but the clear lemon-yellow bile is freely obtained, the presence of a cystic duct obstruction is highly probable. We have proved this seven times at operation.

5. When repeated attempts to obtain any bile are unsuccessful, the condition is pathognomonic of common duct obstruction, either by growth or by stone, showing clinically, of course, obstructive jaundice.

In this work, there are certain possibilities of error which must be taken into consideration:

1. The bile should be examined immediately after withdrawal, since oxidation takes place quickly, with clouding of the bile.

2. A yellowish, cloudy mixture may be obtained in the clear gallbladder bile, which is due to the mixture of bile and acid chyme of the stomach. This, however, is easily recognized.

3. Unless great care is used, gross bacteriologic contamination of the aspirated bile may occur, rendering bacteriologic studies worthless. By the employment of a sterile drainage and collecting tube, with duodenal lavage of a weak antiseptic solution, this contamination is reduced to a minimum.

I have not attempted to follow out bacteriologic studies in many later cases, as I have felt that this was not necessary in order to make a positive diagnosis of gallbladder infection.

We have used this method in eliminating the gallbladder as a focus of infection in several cases and believe that by this procedure as much accuracy is obtainable with the gallbladder as is now possible with the teeth and tonsils.

Future work on the chemical analysis of the aspirated bile, from the point of view of cholesterol pigment and bile salts concentration, when put on a practical basis, will no doubt provide valuable additions to the method of direct bile examination. This procedure may be of use in estimating liver function, by means of certain dye tests, as suggested by Rehfuss.

I have had no opportunity of using this method in suspected gallbladder infections in typhoid fever, or in the detection of typhoid carriers, but I believe it could serve a useful purpose in these fields. Nor have I had the opportunity of applying this procedure as a diagnostic measure in a case of ascending cholangeitis.

When starting this method, I was often asked by my associates what proof there was that I was obtaining gallbladder bile. I submit this:

1. Similarity of the aspirated bile, macroscopically and microscopically, to the bile obtained from the gallbladder at operation.

2. Similar bacteriologic findings, in many cases, in the aspirated and operated bile.

3. The fact that in one case with distended gallbladder, duodenal drainage caused a disappearance of the palpable gallbladder. This was repeated for three successive days.

SUMMARY

The direct examination of aspirated bile, by means of the Meltzer-Lyon method, is of great value in the diagnosis of early cholecystitis. This group is an important one, averaging 23 per cent.[3] of all gallbladder cases presented for examination. The fresh bile shows definite evidences of infection. Cultures are usually positive. The value of the bile examination grows less as the cholecystitis becomes more chronic. In the later lesions, the bile may present a normal appearance. Cultures are usually negative.

The diagnosis of the early acute cases is of extreme importance. These cases progress to the more pronounced gallbladder lesions, as, the strawberry gallbladder, empyema and gallstones.

The clinical signs and symptoms are usually slight in this early group. Vague gastric disturbances, chronic indigestion or minor colic attacks usually bring these cases to the physician.

The surgeon, on exploration, usually fails to incriminate this type of gallbladder. Absence of thickening, with no changes in color of the wall of the gallbladder, would seem to justify his conclusion. The finding of infected bile by duodenal drainage affords the surgeon the definite data that he needs when confronted with the operative solution of these problems.

3. Smithies: Surg. Clinics, June, 1910, p. 505.

AN EDEMA DISEASE IN HAITI

A PRELIMINARY REPORT *

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In Haiti there exists a rather puzzling pathologic condition having some points in common with previously recognized diseases, yet, on the other hand, presenting certain features that suggest the possibilities of a disease *sui generis*.

The clinical manifestations of this disease simulate beriberi, but no paralysis of the extremities has been noted, and the rate of the heart beat is slower than in beriberi. It likewise resembles "prison," "war" or "nutritional" edema, but the Haitian dropsy is apparently more rapid in development, the mortality rate is greater, and a change in diet and environments has not been observed to have any marked effect as a curative. The symptoms and the incidence of the condition under discussion correspond somewhat closely to "epidemic dropsy," and may be differentiated from it by the absence of fever.

CHARACTERISTICS OF THE DISEASE

Our observations comprised approximately 3,000 cases, with a study of more than 200 necropsies.

The edema disease is an acute or subacute condition of at present undetermined causation, characterized by the cardinal symptoms of edema, emaciation, weakness, diarrhea, subnormal temperature and a slow pulse rate. These symptoms, one or more of which may be absent, exist in varying proportion. The dropsical condition may appear and disappear at irregular intervals.

History.—According to our investigations, it appears that this pathologic condition has existed in Haiti for many years. One of our informants states that the disease has been prevalent for the last forty years. This statement was partly substantiated by the fact that this person gave a name by which the natives designated the disease, and further stated that the natives in the hills were accustomed to treat the swollen feet by puncturing the skin of the edematous area with red-hot wire.

Geographic Distribution.—The edema disease is well distributed throughout Haiti, being found inland as

* From the Service Médical, Gendarmerie d'Haiti.

well as in the seacoast towns. It is chiefly present in the prisons of Haiti. Cases have been noted outside the prisons, but, relatively speaking, such cases are rare. Our experience with the disease is necessarily limited to cases observed among the prisoners, especially the inmates of the prisons of Cape Haitien and Port au Prince. There are about fifteen larger prisons in Haiti, having from seventy-five to 600 prisoners. In some of these prisons the cases of the edema disease are rather numerous, and in other prisons, under almost identical conditions as to food and climate, the disease is either entirely absent or else very rare.

Exciting Causes.—The edema has a tendency to appear subsequent to trauma, such as sprain, lacerated wound, fracture, and even tooth extraction. It often follows acute diseases, such as lobar pneumonia. It usually appears without any discoverable exciting cause.

Predisposing Causes.—(*a*) Sex: In the first several hundred cases studied, this disease was limited to the males, and of a consequence, the females were considered immune until quite recently, when three females contracted the disease practically simultaneously.

(*b*) Age: This varies from 16 to 70 years; averaging 31. The old and feeble seem to be more susceptible.

(*c*) Length of Time Incarcerated: In the first series of cases studied the disease was limited entirely to those confined for less than three months. Recently there have been a few isolated cases noted among the long term prisoners. Edema has developed in several cases in less than fifteen days after confinement in the prison.

Etiology.—This is the most interesting aspect of the subject, and the major portion of our activities has been limited to the study of causation. From a material point of view, it was considered of primary importance to ascertain the causative factors in order successfully to combat this condition. The natural assumption is that the prison diet may be at fault, but the results of all our investigations and experimentations tend to indicate otherwise. A political prisoner developed edema of the feet eleven days after incarceration. This early appearance of symptoms would suggest that prison diet would not be likely to be an etiologic factor. This prisoner belonged to the better class of Haitians, and consequently faulty nutrition prior to confinement seems to be an improbable factor in the causation of the edema. The solitary confinement, under most satisfactory sanitary conditions, in a cell of nearly 4,000 cubic feet capacity, with an inlet of 3,888 square inches and an outlet of 800 square inches, would apparently refute the theory of defective hygiene and sanitation. The fact of his isolation would tend to refute the theory that the disease is transmissible by personal contact, and also would suggest that manual labor is not a causative factor.

We could easily present a great deal of additional data, both *pro* and *contra*, regarding the etiology of this malady. The etiology is still under investigation, and any remarks on this subject at this time may be regarded as premature. Our investigations, to date, of the causative factors have mainly been productive of negative evidence—disproving various theories, suppositions and conjectures. Caloric insufficiency, dietetic deficiency, food toxins and the possibility of the presence of infectious agents have been considered in our investigations. The various dietary experiments undertaken by us have repeatedly failed to produce any marked beneficial results, either as a curative or as a preventive. In conducting such experiments, due consideration has been given to the question of lack of vitamins as being one of the etiologic factors.

It appeared at first that the development of edema might show some relation to conditions existing prior to confinement; but investigations fail to support this theory. Forty men, all bandits, captured in the attack on Port au Prince, were examined and found to be in normal physical condition at the time of their confinement in the prison at Port au Prince. The first case of edema developed in twelve days, and within seven weeks about 25 per cent. of the bandits showed symptoms of edema. A few weeks later, nearly 1,000 bandits, from the same region, surrendered, and a physical examination of these failed to detect any cases of edema, which strongly suggests that there were no factors existing prior to confinement which were capable of producing the condition.

Symptomatology.—It is possible to group the clinical types of this disease into "wet," "dry" and "mixed" types. Many of the cases assume an acute pernicious form.

These notes are based on an intensive study of fifty cases. Edema, diarrhea, progressive weakness, and emaciation comprise the most common symptoms.

The occurrence of edema is the finding usually attracting attention to the disease. This usually begins on the dorsa of the feet and later is found over the tibiae. It is a typical edema, and pits on pressure. It may be first noticed in the face, about the eyes. Later all serous cavities may be involved, giving to the entire body a bloated appearance, in marked contrast to the emaciated patients. Edema is often discovered accidentally in the course of a routine inspection; it is frequently noted when a man appears at sick call with some other complaint, or it develops during the course of an acute or chronic disease, or following slight trauma. In several instances, cases of diarrhea, which had begun to improve, developed edema. In one day in the isolation ward three patients reported the diarrhea improved, but complained of swelling of the feet. Gnawing sensations over the gastric region are complained of occasionally. Slight anesthesia, presumably due to stretching of nerve fibrils, is sometimes present; more often the swollen limbs are tender to touch, and the patients do not care to move about. The edema may not involve more than the lower legs; others go on to general dropsy.

Diarrhea occurred at some time or other in twenty-eight of the fifty cases; in eleven it was concurrent, in nine it was noted before the edema, and in eight it appeared later. Diarrhea did not occur in twenty-two cases; of the eight patients in whom diarrhea was noted later, five died. The stool often consists of 5 or 10 c.c. of pus, not constantly associated with any one intestinal parasite. The number of movements varies from three to ten or fifteen daily, and is sometimes accompanied by tenesmus. Pain in the abdomen is infrequent. Constipation is rarely found, but does occur. Vomiting has never been noted.

Emaciation is found frequently, is usually progressive, and may be of an extreme grade. Edema intervenes, and almost over night the picture changes from emaciation to general anasarca. Weakness is often the chief complaint that brings the man to the sick bay; it is most marked in the diarrhea cases. The patient may not be able to get about. Jongck's test is frequently positive. Emaciation is often seen before

edema, and is found at necropsy without gross lesions. The temperature is subnormal, often with wide diurnal variations. Temperatures of 93 are common. The evening temperature may be 5 degrees higher than the morning temperature, and yet not exceed 98.6. The average is from 97 to 97.5 F. In contrast, temperatures were taken of 100 apparently healthy men at 10 a. m., and the average was 98.2.

The pulse rate is low; the average in eighty-eight cases was 57 per minute. In twelve of these, the rate was between 40 and 50, in ten between 50 and 60. The rhythm is normal, and in many instances the quality was remarkably good, considering the physical condition. The heart is not irritable.

In the fatal cases, the average time elapsing between the onset of the edema and the time of death is about twenty-five days.

The mode of death in all cases is essentially the same. Following a period of weakness, severe diarrhea, or a mild terminal bronchopneumonia, the patient gradually loses consciousness, the limbs become cold, and breathing deep, slow and stertorous; the pulse weaker and finally imperceptible at the wrist; there may be incontinence of urine and feces, and in from two to six hours the patient dies.

The prognosis as to the termination of the cases is sometimes confusing. Often a patient who appears to be severely ill will recover, while some of the cases showing only a mild degree of symptoms will suddenly prove fatal.

Necropsy Findings.—In typical "wet" cases at necropsy all tissues are edematous. In the thorax there is an amount of fluid varying from 200 to 1,000 c.c. The pericardial cavity contains an excess of fluid; the surface of the heart is edematous and may appear gelatinous. In the abdomen the omentum is very wet, especially in the region of the duodenum; ascites of varying degree is found—there may be a quart to several gallons of straw-colored fluid, clear and of low specific gravity. Other cases, those having emaciation as the most prominent feature, with little or no edema, are characteristically dry. The spleen is of normal size, or may be shrunken, with a wrinkled capsule, and presents considerable resistance to the knife. A slight to moderate amount of cirrhosis of the liver is generally found. The lungs are usually congested; many show a patch of bronchopneumonia. The heart is constantly found of normal size; the heart valves were normal in all necropsies but one, in which mitral vegetations were present. The kidneys are normal, grossly. Ulcerative colitis was found in three, in others a catarrhal condition, clearly insufficient to cause death.

Laboratory Findings.—Blood counts have shown a mild grade of secondary anemia, with a tendency to leukopenia. The average red count in eleven cases was 4,388,000; the average white count in nine cases, 7,270; the average hemoglobin (Tallqvist) in ten cases, 85 per cent. The urine in twenty-eight cases examined was negative for albumin. Malarial organisms have not been found. In forty feces examinations, twenty-one were negative; intestinal parasites found in the others were: *Ascaris lumbricoides*, 12; hookworm, 6; *Balantidium coli*, 1; stronglyloides embryos, 2; *Trichuris*, 2, and flagellates, 3. Fifteen cases showed either blood or pus or both. Blood cultures have been negative.

Treatment.—The treatment has been chiefly symptomatic. Dietetic treatment has been given a rather extensive trial, with results that were not at all gratifying. In a few of the cases, arsenical preparations have appeared to exert some beneficial influence on the course of the disease.

SUMMARY AND CONCLUSION

In Haiti, there exists an edema disease, of undetermined causation. The incidence of this disease is most peculiar in that it is prevalent in some institutions, and in other similar institutions it is extremely rare or entirely absent.

ARTHRITIC CHANGES IN THE SPINE

THEIR RELATION TO THE ROENTGENOLOGIC STUDY OF THE GASTRO-INTESTINAL TRACT *

WILLIAM S. NEWCOMET, M.D.
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It has always been well known that certain diseases of the spine, whether some inflammatory condition of the bone, joint muscle or even one of the more obscure disturbances of the nervous system, give rise to abdominal pain, which varies in intensity and extent according to the part involved. Some are quite definitely established; for instance, the gastric crises of tabes. Conversely, there are certain conditions of the digestive system that give rise to pain in the back, and no doubt are too often regarded as infallible evidence of some special disorder, particularly if the pain is well localized. Disturbances of the gallbladder or liver often have referred pain to the right shoulder and back, while a psuedo-angina will affect the left shoulder, arm and back.

Pain alone in any part of the body is likely to disturb the whole digestive system, and even medicines given for relief may prove an active factor.

Slight congenital deformities of the spine, such as the failure of the posterior arches to unite, most commonly noted in the lower lumbar spine, under certain circumstances, give rise to a wide reflex disturbance. This condition was observed in a number of men inducted into the army. Under normal conditions persons having such defects seek more favorable work and environment, where these defects pass unnoticed. But in the military life, where one was compelled to rank with the normal individual, such men "broke," and while complaining of a wide range of symptoms, most vague and indefinite, were often classified as malingerers.

In the active stage of Pott's disease, abdominal pain may be noted, which, after the acute process subsides, often disappears entirely even though the deformity is quite marked. In other words, the associated pain is noted during the active process.

These facts all tend to show a cross-relation between active disease in the abdomen and active disease in or about the spine, with regard to reflex pain and the great difficulty of localizing an active process from the seat of the referred pain.

The points to which reference has just been made are not new, nor have the changes of ostearthritis of the spine escaped unrecognized; but it does seem that the disturbance of the gastro-intestinal system due to the changes taking place have not been closely associated, particularly in the early cases. It is perfectly reasonable to believe that individuals suffering from

* Read before the Section on Gastro-Enterology and Proctology at the Seventy-First Annual Session of the American Medical Association, New Orleans, April, 1920.

ostearthritic changes in the spine might be expected to present abdominal symptoms, because they suffer from what might be regarded as an acute process. While this is often slow in its development, it is at least active and progressive, involving the bones and joints of the spinal column, which, under other diseased conditions in which the structure of these parts is greatly altered, show a wide reflex disturbance.

In well developed cases of many years' duration, these changes in the bone and joints are not difficult to recognize from the roentgenogram and may be easily demonstrated. Is it not reasonable, therefore, to believe, although at present no one has referred to it, that patients suffer pain, in the formative stage, long before the process can be recognized by those well marked changes seen on the roentgenogram? And although the spine is a most difficult part to study on the ordinary roentgenogram, may we not hope that some one in the future may depict these early changes, especially since attention has been called to the long continued suffering which they cause?

The cases referred to in this article came under observation for the study of some condition of the gastro-intestinal tract, such as gastric or duodenal ulcer, appendicitis or cholecystitis. Some were believed to be psychasthenics, and in one instance a woman had passed through several operations without relief.

In some cases the pain was suggestive of the conditions mentioned, but in others, on close questioning, they described the pain as more localized in the back: an aching, not necessarily severe, and under some circumstances only slightly annoying. It was localized at times between the shoulders, or in the small of the back, and as a rule associated with this pain was the usual "sour stomach," belching, heartburn, and, naturally to be expected, constipation.

Most of these cases presented the whole gamut of signs and symptoms of the ordinary run of chronic indigestion with the usual history of treatment, which began by taking medicine from one physician and then another, often including a course in "patent medicine," to be followed by a course of treatment at various springs and health resorts, but without relief.

The victims are usually middle aged. They are not emaciated; on the contrary, the development of the body is good. They are often inclined to be stout, and for this reason and the vague character of the symptoms, are often classified as psychasthenics. Pemberton has done considerable work on absorption and elimination in relation to the alimentary canal in the various forms of arthritis, and regards the process as being due to the improper assimilation of food. He has accomplished some brilliant results by the regulation of the diet. From this standpoint he believes that the malassimilation from the gastro-intestinal disturbance is the cause of the arthritis.

If this is true, then the early recognition of it would spare many victims a long period of discomfort. Here attention is again directed to the fact that this spinal condition is not usually observed in those instances in which serious trouble of the gastro-intestinal tract is found, such as a gastric ulcer or an inflamed appendix of long duration which has escaped recognition. Nor is it to be confused with those cases of carcinoma associated with metastasis to the spinal column, although the coexistence of these ostearthritic changes and metastatic carcinoma was observed in a case referred some years ago by the late Dr. William L. Rodman. The general type of the case, the signs and symptoms, would exclude error from that source. At the same time the great majority of these arthritic cases present negative findings of the gastro-intestinal tract, from a roentgenographic standpoint.

The process is observed in a well marked case by the structural changes. About the bodies of the vertebra, small toothlike processes extending from the rim of the upper and lower surface and in most instances bending outward, are at times so numerous that they interlock. The usual length is from 2 to 4 mm., depending on their location, their width being from 1 to 3 mm. Sometimes the whole rim of the vertebra is involved, when it appears as a knifelike edge, with a base from 2 to 4 mm. thick with the general appearance of the bodies being somewhat mushroomed. In other words, the body from joint to joint is markedly concaved on its surface. There has been an excessive amount of bone deposit from the joint surface backward, and no change has taken place in the height of the vertebral body. This description is only of the well marked case—one not hard to demonstrate. But in the very early cases, when the process has not developed to the degree here noted, clear roentgenograms are needed, and these are at times difficult to obtain, owing to the development of the individual, and the difficulty of obtaining clear roentgenograms of the spine under normal conditions. A greater preference is shown for the dorsal portion of the spine for the development of this disease, while in the lumbar portion the osteophytes are usually less numerous and more widely scattered.

Associated with this condition appears to be the development of osteophytes on other bones, such as the os calcis and the rim of the pelvis. They usually extend outward along the course of the tendons; from the rim of the pelvis they extend downward 2 or 3 cm., and likewise from the os calcis into the plantar fascia. The length here is usually from 0.5 to 1 cm. They may be seen on other bones, but are not to be confused with osteophytes developing from other causes, such as trauma.

These changes are not to be connected with the so-called rheumatoid arthritis or those diseases closely allied to it, involving the joints of the hands, wrists, feet, ankles, etc. Usually, in these cases there is a rarefaction of the bone with absorption and a consequent destruction of the joint. Attention has been called to the fact that in these arthritic cases one virtually never sees one process alone; in one area there will be a bone building, while in the other there will be bone absorption. The osteophytes appear on the shafts of the bone and about the joints, yet the bone destructive process is in far greater proportion, even to the extent that large joints are destroyed. Here also is observed a marked degree of osteoporosis, and these processes are to some extent observed in the spines of these cases.

Quite in contrast are these cases of ostearthritis. Persons presenting well marked changes in the spinal column from this cause usually have well formed hands and feet, with their other joints in good condition, and there is no destruction of the joint surfaces.

It is not my purpose here to differentiate the various forms of arthritis, or to dilate on their supposed causes, but to call attention to a well marked condition that gives rise to a confused train of gastro-intestinal symptoms.

CONCLUSION

It is suggested that in those instances of chronic gastro-intestinal disease associated with vague pains in the back, the spinal column be closely studied, whereupon, no doubt, many of them will be explained.

ABSTRACT OF DISCUSSION

DR. JULIUS GRINKER, Chicago: Did you notice other phenomena beside pain in the abdomen in the cases of arthritis of the spine? Did the patients complain of so-called "intercostal neuralgia," or any other pains? Was there any stiffening of the spine as a whole, or of any other part? It seems very strange that changes such as were noted should result only in abdominal pain. There must have been something in the way of symptoms to attract attention to the spine other than the routine making of a roentgenogram—or the spinal finding stands in no relation to the abdominal pain.

DR. E. H. SKINNER, Kansas City, Mo.: A similar report was made by Blaine at one time. He found similar changes in the spine in cases referred for examination of the genito-urinary tract. Of course, there is nothing pathognomonic about these shadows in regard to the patient's gastro-intestinal symptoms. These are merely incidental findings in the course of the examination. Undoubtedly these patients had been referred without sufficient preliminary study; in fact, they overlooked a condition which is the result of a general infection, or it may be a metastasis from some focal infection.

DR. WILLIAM S. NEWCOMET, Philadelphia: I tried to make clear that these patients came for gastro-intestinal examination. Dr. Blaine found the same conditions in cases sent for examination for kidney stone. The true nature of the cause of symptoms had escaped notice. I believe that the early stages are not recognized, because so many appear to escape. Nor is it intended to infer that this is a method for recognizing ostearthritis.

DR. JULIUS GRINKER, Chicago: Dr. Newcomet did not understand my question. I want to know if other symptoms on the part of the nervous system have been looked for in the cases cited. Was any other examination made that might direct attention to the spine, outside the casual findings by the roentgen ray, so that neurologists could learn thereby when to look for trouble in the spine with certain symptoms to direct attention thereto?

DR. WILLIAM S. NEWCOMET, Philadelphia: You must remember that the spine is involved almost from the neck to the sacrum, and there would be a wide variation of symptoms. I cannot answer the question as to whether it would have been possible to make a diagnosis from symptoms alone. That would be an assumption on my part since it is not in my line. It seems, however, to be fertile field for careful study.

International Review of Epidemiology.—The first issue has been received of the new international quarterly founded at Warsaw by the Central State Epidemiologic Institute, of which Dr. L. Rajchman is director. The yearly volume is to have about 800 pages, and it is open to writers in various tongues, a summary in one of the congress languages being given with each article. Two colored plates accompany articles by Weigl of Lemberg and Anigstein of Warsaw. Weigl describes his technic for infecting lice with typhus by injecting leukocytes from the blood of typhus patients through the anus of the louse. The louse acts as an artificial culture medium, and facilitates study of the behavior of the rickettsia in cells and tissues. Lice thus infected with *Rickettsia prowazeki* invariably succumb. His results with a vaccine have been encouraging; all the vaccinated have been free from infection during the several months to date. Anigstein's plate shows the characteristic blood findings in typhus. The address of the institute is Langnerowska 2, Warsaw. The review is called *Przeglad Epidemjologiczny*.

THE PREFERRED BASE FOR ZINC OXID OINTMENT

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The revision of the United States Pharmacopeia has raised the question as to the most suitable vehicle for zinc oxid ointment. Considerable dissatisfaction has been expressed with the official vehicle (benzoinated lard); and petrolatum or other bases have been extensively substituted. Fears have also been expressed that these modified ointments entailed a sacrifice of therapeutic efficiency.

The chairman of the Revision Committee having requested information on this subject, it appeared probable that the question could be answered without further experimentation on the basis of the existing experience of American dermatologists. These are ably represented in the membership of the American Dermatological Association. The officers of this association were accordingly approached, and cordially agreed to collect the information from its members.

QUESTIONNAIRE

The following questionnaire was sent to the members of the association, by its secretary, Dr. U. J. Wile:

The Committee of Revision of the U. S. P. has under consideration the subject of a suitable base for zinc oxid ointment, and has requested the cooperation of the members of this association for arriving at a decision. The base official in the U. S. P. IX is benzoinated lard. This tends to become granular and rancid. Petrolatum has therefore been substituted, resulting in an ointment that remains smooth. However, it has been questioned whether or not this ointment is equal therapeutically to the official ointment. It is claimed that the lard is absorbed by the skin, leaving the dry zinc oxid, while the petrolatum remains more oily. However, no data of the sort appear to have been published. Others again prefer as base a mixture of equal parts of petrolatum and lanolin (hydrous wool fat), which possibly adheres to the skin in a thicker layer.

The Committee of Revision would appreciate your reply to the following questions:

1. Which base do you use in zinc oxid ointment?
2. Have you had personal experience with zinc ointments made with other bases?
3. What differences have you found between them?
4. Do you consider these differences as important?

GRADING

Thirty replies have been received.[1] The preferences expressed in these for each were graded as: great advantage, +3; considerable advantage, +2; slight advantage, +1; indifferent, 0; undesirable, —1; very undesirable, —2.

Only the bases specifically mentioned in the replies were graded. The simple addition of these grades or "points" gives a good estimate of the relative preference for the various bases, except that it errs somewhat in favor of the official base. For when a correspondent

1. From H. E. Alderson, San Francisco; A. P. Biddle, Detroit; A. W. Brayton, Indianapolis; Randolph B. Carmichael, Washington, D. C.; G. D. Culver, San Francisco; C. N. Davis, Philadelphia; Howard Fox, New York; T. C. Gilchrist, Baltimore; Joseph Grindon, St. Louis; W. J. Highman, New York; H. G. Irvine, Minneapolis; J. E. Lane, New Haven, Conn.; David Lieberthal, Chicago; E. D. Lovejoy, Los Angeles; G. M. MacKee, New York; R. A. McDonnell, New Haven, Conn.; Howard Morrow, San Francisco; O. S. Ormsby, Chicago; W. A. Pusey, Chicago; J. F. Schamberg, Philadelphia; C. Morton Smith, Boston; John H. Stokes, Rochester, Minn.; H. P. Towle, Boston; C. J. White, Boston; H. H. Whitehouse, New York; James M. Winfield, Brooklyn, and Fred Wise, New York. Three further replies were unsigned.

indicates a preference for another base, it is clear that he must have discarded the official base as undesirable, and therefore as deserving a minus grade. Unless, however, he mentioned it specifically as unsatisfactory, I assigned it merely as zero (i. e., "indifferent") grade, so as to be on the safe side.

PREFERENCE FOR PETROLATUM

According to this scheme, the various bases ranged, in order of standing: petrolatum, 20 points; petrolatum-lanolin 1:1, 11 points (6 for 1:1; 1 for 3:1); benzoinated lard, 6 points; cold cream, 5 points; lard and lanolin, 3 points (2 for 2:1; 1 for 1:1); petrolatum and cold cream, 2 points (1:1); cold cream and lanolin, 1 point (1:3).

Petrolatum clearly leads all the others by a wide margin, and is evidently the base preferred by American dermatologists.

The reasons for this preference are discussed in the comments, which are appended. The gist of these is to the effect that the base is quite immaterial as concerns therapeutic results, and that in view of this the superior mechanical properties and keeping qualities of petrolatum cause it to be preferred.

Those who use the petrolatum-lanolin mixture do not appear to consider it materially superior to petrolatum, but prefer it rather as a matteer of custom. I myself believe that the more sticky consistency of the mixed base permits the application of a thicker layer, but evidently this advantage has not a great practical value, and does not offset the greater convenience of the plain petrolatum base.

LARD

Disadvantages.—The special drawback of lard consists in its odor, which is disagreeable to some persons even when the ointment is reasonably fresh, and intensely so to every one when the ointment is rancid, as it so commonly is or becomes. This odor is not effectively disguised or prevented by benzoination. The second drawback is the granular character which the official ointment acquires and which is very undesirable in an ointment.

It may be that these deteriorations do not occur under ideal conditions; but it is the evident experience of all prescribers that they are the invariable rule under the conditions of medical practice. These conditions might perhaps be changed if it were really worth the trouble, i. e., if the lard or similar base really had corresponding advantages. The replies, however, show that it has no real advantage.

Advantages Claimed for the Lard Base.—The advantage commonly claimed for the lard base is that it is said to be more easily absorbed, and would thus be followed by a "drying" effect.

However, as Dr. Pusey points out, there is no good evidence that lard is absorbed; and as he and other correspondents (Alderson, Stokes) remark, in using zinc oxid ointment, it is not desirable to have the base absorbed, but quite the contrary. An ointment of this type is used for protection furnished by the base quite as much as for the action of its other ingredients. Where "drying action" is desired, rather than an emollient effect, it would be better to use a dusting powder in place of an ointment.

Concerning the special absorbability of animal fats and lanolin from the skin, this seems to be largely a myth, based probably on confusion with the absorption of the medicinal ingredients of ointments.

In view of the paucity of facts in the literature, I started comparative experiments a year or two ago to determine the amount of animal, vegetable and mineral fats that could be rubbed into the skin so that it could not be wiped off with cotton. Some penetration doubtless occurred; but the results were so slight and inconstant that the investigation was dropped as unpromising.

When an ointment is simply smeared on, especially over a wet surface, penetration of the fat is almost inconceivable. Any diminution in the quantity of the ointment would be by absorption into the dressings. When hydrous wool fat is applied to the intact skin, partial absorption might be simulated by the evaporation of its water.

A second advantage claimed for the lard base is that it mixes better with tar, chrysarobin or ichthyol than does petrolatum. There is no reason why lard should not be prescribed for such special mixtures, instead of employing the petrolatum base, even should the latter be official. In fact, several of the correspondents believe that the lard ointments should always be prescribed and mixed extemporaneously.

The advantages of petrolatum are well expressed by Dr. Towle: "Cleaner; spreads better; less apt to irritate; keeps better."

The cost is an incidental advantage; but from the standpoint of the public, this is negligible.

Some correspondents (Grindon, Pusey) express themselves as dissatisfied with certain petrolatums that pass as of U. S. P. quality, and consider it necessary to specify the brands. This subject should be referred to the proper pharmacopeial committee with the inquiry whether the official standard could be improved.

CONCLUSIONS

The consensus among the leading dermatologists is distinctly in favor of petrolatum as the basis of zinc oxid ointment as being equal to lard therapeutically, and superior in consistency, keeping quality, and absence of irritation.

It is therefore recommended that this be made the basis of the official ointment.

Lard may have advantages as a base for compound ointments, in which case the entire ointment may be made up extemporaneously.

COMMENTS OF CORRESPONDENTS[2]

PETROLATUM

3. The petrolatum makes a more stable ointment, but it does not penetrate. I use this ointment principally for protection, anyway; why should one want a *penetrating* zinc ointment?

3. Mainly that of application. I often follow petrolatum with zinc oxid.

4. Not especially, but the petrolatum seems to be most popular with patients, as it is smooth and somewhat oily.

3. That made with benzoinated lard will grow rancid, also granular.

4. Quite so. Therapeutic results are far better with good zinc ointment than with a poor specimen.

4. Each prescription may be varied to suit the particular need, and with any base except petrolatum it is advantageous to have the ointment made fresh, which in most cases will not be done unless the ingredients are varied frequently. Look at the zinc ointment and Lassar's paste in the stock jar of almost any drug store.

Petrolatum is satisfactory.

For a stock zinc ointment I think petrolatum offers the best base because it makes a smooth ointment that does not become

2. The numbers refer to the questions in the questionnaire.

rancid. While you can get a well made cold cream that makes a nice ointment and one that is more soothing, it is not suitable for a stock base because it decomposes, and because it varies so much in quality. If it were true that benzoinated lard or lanolin mixtures were better absorbed than petrolatum, I do not know what superiority that would give. Ointments are used for protective purposes, not as a rule to get substances into the skin. It is, I think, however, entirely uncertain that these other ointment bases are absorbed to any materially greater extent than petrolatum. I am not certain, for example, that a petrolatum mercurial ointment is not just as good as any of the rest, the absorption ability of the mercury depending more on the consistency of the ointment and the minute division of the mercury than on the character of the base. On the whole, I think it would be highly desirable to make petrolatum an official base for zinc ointment.

4. My impression is that petrolatum would make a more satisfactory base.

3. The yellow petrolatum base is in my opinion very much better adapted to the dressing of open lesions, particularly varicose ulcers. The petrolatum ointment remains smooth indefinitely and is absolutely nonirritating. The purpose in this type of dressing is not to promote absorption but to serve as a protective. When we desire to use zinc oxid ointment for a vehicle for such ingredients as tar and chrysarobin we prefer the benzoinated lard base.

3. Petrolatum: cleaner; spreads better; less apt to irritate; penetrates exudates better; keeps better.

4. Important enough for me to write extemporaneous prescriptions calling for petrolatum base instead of writing "Ung. Zinc. Ox." and accepting the lard base. Am in favor of change in official base to petrolatum.

BENZOINATED LARD, FAVORABLE

Seldom hear of zinc oxid ointment becoming rancid, even if made with lard.

3. Benzoinated lard mixture is more softening, less fatty, can be finely spread, and is more cooling. Furthermore, there are some people whose skin does not tolerate petrolatum but takes kindly to benzoinated lard.

3. We find that crude coal tar, ichthyol and other preparations added to bases other than the foregoing do not mix well, particularly when petrolatum is used.

4. I use lard to get deeper penetration and better protection from the thicker substance.

3. Petrolatum too oily and acts more like a varnish. Petrolatum and lanolin adheres to the skin but does not seem to be absorbed.

3. Experience no trouble when freshly prepared in small amounts.

BENZOINATED LARD, UNFAVORABLE

3. Lard becomes rancid; ointment more drying.

3. The U. S. P. ointment has an odor of lard which to me is intolerable even when fairly fresh. The odor of a large part of the lanolin at present in the market is also objectionable.

3. Somewhat granular.

2. Yes. I have used petrolatum, petrolatum and lanolin, and rose water ointment as bases.

3. Therapeutically, very few, if any. The official zinc oxid ointment has proved irritating, at times, from rancidity.

Lard is granular and becomes rancid.

3. Preparations made with benzoinated lard become "grainy" and also tend to separate.

PETROLATUM AND LANOLIN

3. Lanolin and petrolatum will do instead of cold cream and petrolatum.

The addition of hydrous wool fat is unobjectionable *when made by a painstaking, competent pharmacist;* otherwise the two bases are not thoroughly incorporated. I do not think it is in any case very advantageous, as in zinc ointment the absorption is not a desideratum. Action is mechanical.

Occasionally I use an ointment base of equal parts of petrolatum and lanolin. Satisfactory when good lanolin can be procured.

4. Generally write prescription instead of ordering U. S. P. Petrolatum and lanolin is most satisfactory but expensive.

4. The chief use of zinc ointment is as as protective dressing, and I think the petrolatum and cold cream or lanolin, whether equal parts or less lanolin, makes a smoother preparation.

OTHER BASES

2. Gave up lard base years ago, because R. B. Wild, professor of pharmacology, Victoria University, England, who was on the British Pharmacopeia Committee, showed by experiment that cold cream and lanolin or petrolatum vehicle caused the base to be absorbed more. I followed Wild's deduction after a personal interview with him.

3. Lanolin and petrolatum too sticky; benzoated lard gets rancid, and none have the cooling effect of unguentum aquae rosae, owing, I believe, to the evaporation by the water.

ACTION OF MERCUROCHROME-220 AND OF MERCUROPHEN

A PRELIMINARY REPORT OF EFFECTS ON THE HUMAN TUBERCLE BACILLUS AND ON EXPERIMENTAL TUBERCULOSIS IN GUINEA-PIGS *

LYDIA M. DeWITT, B.S., M.A., M.D.
CHICAGO

Mercurochrome-220, prepared by Young, White and Schwartz, and mercurophen, made by Schamberg, Kolmer and Raiziss, are two organic mercurial preparations that have attracted unusual attention because of their high germicidal activity, their low toxicity, and their slight local irritating action. Young, White and Schwartz [1] showed that mercurochrome-220, which is a mercury compound of fluorescein, has a high and rapid bactericidal action in urine or hydrocele fluid on most of the ordinary bacteria, and that a 1 per cent. solution could be injected into the urinary bladder and retained for some time. Clapp and Martin [2] reported favorable results from its use in gonorrheal ophthalmia neonatorum, and Lancaster, Burnett and Gaus reported good results in conjunctivitis and also partly confirmed the earlier bactericidal laboratory results.

Mercurophen, or sodium oxymercury-orthonitrophenolate, according to Schamberg and his associates [3] is equal or superior to mercuric chlorid and other mercury compounds in germicidal activity, and maintains better its power in blood serum. It is a good disinfectant for instruments, which it does not tarnish, and for urine, pus, feces, sputum, catheters, rubber gloves and skin. It is less toxic for animals than other soluble mercurial compounds.

I have found that, while mercurochrome inhibits the growth of the tubercle bacillus completely in a dilution of 1:5,000, and partially at 1:10,000, mercurophen completely inhibits in dilutions of 1:50,000. Mercurochrome in a dilution of 1:100, but not in higher dilutions, killed tubercle bacilli in twenty-four hours so that they would not infect guinea-pigs. On the other hand, mercurophen, while it did not kill uniformly in less than twenty-four hours, did kill in dilutions of 1:10,000 in twenty-four hours; and the development of the disease in guinea-pigs inoculated

* From the Otho S. A. Sprague Memorial Institute and the Pathological Laboratory, University of Chicago.

1. Young, H. H.; White, E. C., and Schwartz, E. O.: A New Germicide for Use in the Genito-Urinary Tract: "Mercurochrome-220," J. A. M. A. **73**: 1483 (Nov. 15) 1919.

2. Clapp, C. A., and Martin, M. G.: Use of Mercurochrome-220 as a Germicide in Ophthalmia Neonatorum, J. A. M. A. **74**: 1224 (May 1) 1920.

3. Schamberg and others: J. Infect. Dis. **24**: 547, 1919.

with the exposed tubercle bacilli was generally delayed much longer than in the controls, even after shorter exposure to dilutions of 1 : 5,000 and 1 : 10,000.

In guinea-pigs inoculated with tuberculosis, treatment with either mercurochrome or mercurophen seemed to delay considerably the development of the disease; but marked generalized tuberculosis occurred in all the animals that lived long enough. Both drugs, if given by subcutaneous injection, caused infiltration, induration, necrosis and ulceration of the tissues around the point of injection. Apparently there was little absorption into the general circulation. Non-tuberculous animals treated in the same way showed no toxic effects, except the local effects described above.

While there seems to be but little beneficial action from either of these drugs in tuberculosis of guinea-pigs, it seems to me possible that mercurophen especially, because of its high bacteriostatic power, might be used with benefit in lupus and in ulcerating tuberculous conditions of the throat, larynx or bladder that are accessible for local treatment.

Clinical Notes, Suggestions, and New Instruments

BLUNT DILATATION OF THE VESICAL FISTULA IN TWO STEP PROSTATECTOMY

GUSTAV KOLISCHER, M.D., AND HARRY KATZ, M.D., CHICAGO

One of the advantages of the two step operation is the consolidation of the bladder with the surrounding structures, and the subsequent obliteration of the cavum Retzii and the other paravesical spaces. These favorable conditions may be impaired or entirely lost if the surgeon at the time of the enucleation of the prostate enlarges the sinus by a bloody incision, thus opening the way for complications that increase the danger of the interference, or at least adding to the length of time of the complete recovery. It is true that in many instances the surgeon will succeed by introducing first one and then two fingers into the sinus to stretch the opening sufficiently for the enucleating manipulations. But this maneuver will be successful only if the cicatrization is not of a firm character, and implies the danger of stripping off the bladder from its attachments to the abdominal wall. Insufficient widening of the sinus may cause the manipulations inside the bladder to tear loose the viscus from its retro-symphyseal conglutination, an incident that is particularly undesirable on account of reopening the cavum Retzii and thus producing a cavity that is prone to furnish hemorrhage and invite infection.

All these untoward results may be avoided by slow and systematic instrumental dilation of the vesico-abdominal sinus. The simplest method consisted in the employment of Tupelo or compressed sponge tents; but these being off the market now, other agents have to be used for this purpose. As a rule, sufficient dilatation of the sinus will be accomplished by the inserting of Goodell uterine dilators into the abdominal sinus. After the dilatation is thoroughly accomplished in one direction, an assistant fixates the dilator at the height of extension while the operator introduces a second one, the branches of the latter being held at right angles to the first introduced dilator. By using pressure on the handles of the last applied dilator, the dilatation of the sinus is carried up to the necessary extent. In case of rather rigid cicatrization around the circumference of the fistula, a preparatory treatment has to be installed in order to prevent tearing and to insure satisfactory stretching.

Twenty-four hours before the intended enucleation, a thick walled rubber tube exceeding the sinus about threefold in caliber is grasped at one end with the beak of 8 inch forceps, and by pulling the distal end upward the rubber tube is stretched to the utmost. The forceps now introduce one thinned out end of the tube deep into the sinus, and while the forceps are withdrawn, the tension of the tube is gradually lessened until the tube is entirely relaxed again. The tubing is left in place for twenty-four hours, and after the elapse of this time the abdominal fistula is not only considerably dilated but its walls are also softened to such an extent that the Goodell dilators will act without any difficulty.

A POLYCHROME METHYLENE BLUE STAIN FOR FRESH TISSUES

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As the staining and sectioning of fresh tissues removed at operations is being performed to a considerable extent in laboratories of surgical pathology, it was thought advisable to describe a method of making the polychrome methylene blue stain that is so extensively used in this work. A number of methods have been published, but they all require time for ripening. The shortest time (that described by Terry[1]) required six days. We have found that this period for ripening can be eliminated by boiling the mixture, the stain on cooling and filtering being available for immediate use.

FORMULA	Gm. or C.c.
Water (distilled)	100
Potassium carbonate	1
Methylene blue	1

The ingredients are boiled in a flask for fifteen minutes and allowed to cool. A slight precipitate may form. After filtering, the stain may be used at once. The precipitate should be allowed to dry on the filter paper. This may be dissolved off with 20 or 25 c.c. of 95 per cent. alcohol and added to the filtrate. This stain keeps well and, if anything, improves with age. The efficiency of the stain is considerably increased by the use of a mounting fluid made according to the accompanying formula.

MOUNTING FLUID	Gm. or C.c.
Water	75
Sodium chlorid	8
Resorcin	2
Glycerin	25

This efficiency depends on the resorcin, which sharpens up the red.

PASSING THE DUODENAL TUBE

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The increase of our knowledge of the physiology of the stomach and duodenum, and of the duodenal tube as a diagnostic instrument, has caused a widespread demand for its use. Owing to the flexibility of the tube and discomfort to the patient in "swallowing" it, much difficulty is experienced in passing.

After repeated trials of various methods of getting the tip into the stomach, I have found that the most efficient method is this: The patient is given a clear understanding of the procedure, in order to gain his cooperation, without which success is well nigh impossible. He is placed in a sitting position and allowed to compose himself. The tip is placed as far back as possible and the patient told to swallow. Then the tongue is raised, pressing the tube against the roof of the mouth. The tongue is now a grooved director, through which the tube can be gently pushed down the esophagus. Pressure with the tongue must be firm but not too firm to permit pushing the tube. In some cases it is necessary to insert the tip with forceps and give a few swallows of water, to enable the patient to swallow the tip. After the tip reaches the stomach it passes to the duodenum in the usual manner.

This method has not failed in a single case in which the cooperation of the patient could be obtained. It saves much time and causes virtually no discomfort to the patient.

1. Terry, B. T.: Increasing the Pathologist's Usefulness and His Rewards, with Directions for Preparation and Use of a Polychrome Methylene Blue Stain for Frozen Sections, J. A. M. A. **74**: 1775 (June 26) 1920.

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SATURDAY, NOVEMBER 20, 1920

IS HISTAMIN A NORMAL CONSTITUENT OF THE PITUITARY?

The pronounced physiologic activity exerted by extracts of the posterior part of the hypophysis cerebri, notably their stimulating action on smooth muscle fibers, is so thoroughly substantiated that it has justified the use of pituitary extracts in human therapy. Thus, possible fields for their use have been suggested in the management of postpartum hemorrhage and in certain conditions of uterine atony, since pituitary extracts tend to produce marked contractions of excised uterine musculature. The products have also been proposed as remedies in conditions of shock, in which their acknowledged pressor effects might be manifested to at least temporary clinical advantage.[1]

In their Pharmacology of Useful Drugs, Hatcher and Wilbert[2] point out the need of more comprehensive knowledge of the pharmacologic actions of pituitary preparations. According to these writers, the manufacturers of the numerous preparations are most optimistic regarding the therapeutic value of their preparations in a great variety of conditions, in some of which they are certainly useless, if not positively dangerous. For preparations to be used in uterine therapy, in particular, it has been urged that they should be standardized by comparison with pure beta-iminazolylethylamin (histamin), which has a comparable effect, though in much smaller dosage. Hatcher and Wilbert remark that, unfortunately, the various commercial preparations of the pituitary gland vary widely in their activity, and it should be remembered that tests based on the capacity for increasing the blood pressure or the secretion of urine afford no index of the activity on the uterus.

The difficulties and uncertainties of standardization and dosage would obviously be averted if the actual active ingredients of the hypophysis were isolated and identified. The problem seemed to be solved last year when Abel and Kubota[3] of Johns Hopkins University asserted that "histamin is the plain muscle-stimulating and depressor constituent of the posterior lobe of the pituitary gland." They actually isolated a small quantity of the compound in purified form from a large portion of dried gland substance. Unfortunately for this apparently definitive observation, Hanke and Koessler[4] of the University of Chicago maintain that perfectly fresh beef hypophysis does not contain histamin. They came to this conclusion by the examination of tissues collected at the abattoirs with great care to prevent any postmortem change. They are inclined to attribute the unquestioned finding of histamin in pituitary products to the action of micro-organisms on the proteins of the tissues from which it is readily obtainable by bacterial agencies acting on histidin. This amino-acid is furnished by virtually all proteins. As Hanke and Koessler point out, furthermore, the method used at the slaughter houses for preparing dried glandular products gives ample opportunity for changes, both autolytic and bacterial.

It is logical to wonder whether the alleged potencies of pituitary preparations are accordingly to be ascribed to indefinite admixtures of chance postmortem derivatives. The specific pharmacologic action of pituitary extracts cannot be so readily explained away. Undoubted differences between the hypophysis products and histamin in their physiologic behavior have repeatedly been pointed out. They appear, for example, in relation to the comparative bronchoconstrictor action.[5] Rowntree has observed in cases of diabetes insipidus (chronic polyuria) in man that the reaction of pituitary extract in suppressing the polyuria for days cannot be duplicated by injections of histamin. Furthermore, according to Sollmann and Pilcher,[6] the typical urticaria-like wheal produced on application of histamin to the scarified skin of man cannot be obtained with pituitary extracts. The question therefore still remains: "What is the potent constituent of the hypophysis?"

1. New and Nonofficial Remedies, Chicago, American Medical Association, 1920, p. 206.
2. Hatcher, R. A., and Wilbert, M. I.: Pharmacology of Useful Drugs, Chicago, American Medical Association, 1915, p. 198.
3. Abel, J. J., and Kubota, S.: J. Pharmacol. & Exper. Therap. **13**: 243 (June) 1919.
4. Hanke, M. T., and Koessler, K. K.: Studies on Proteinogenous Amines, IX, Is Histamine a Normal Constituent of the Hypophysis Cerebri? J. Biol. Chem. **43**: 557 (Sept.) 1920.
5. Jackson, D. E., and Mills, C. A.: J. Lab. & Clin. Med. **5**: 1 (Oct.) 1919.
6. Sollmann, Torald, and Pilcher, J. D.: J. Pharmacol. & Exper. Therap. **9**: 309 (March) 1917.

HEREDITARY TRANSMISSION OF THE EFFECTS OF ALCOHOL

The influence of ethyl alcohol on the human organism has not yet become of solely historical interest in the United States. We may be justified, therefore, in calling attention to some of the experimental evidence that has been obtained in recent years concerning the effects produced by alcohol on laboratory animals. The studies of Stockard on the guinea-pig have become widely known. He found that repeated exposure of guinea-pigs to alcohol fumes resulted in marked interference with their reproductive capacity. In his earlier experiments, from forty-two matings of alcoholic

guinea-pigs only eighteen offspring were born alive, and of these only seven survived more than a few weeks, five of them being physically defective runts. The effect of the alcoholism was the same whether the male or female parent had been alcoholized, showing that the detrimental effects had been produced by action on the germ cells. Subsequent studies corroborated and extended these observations, it being stated that "in the fourteen measured points considered, the offspring of the alcoholic series are below the normal control in thirteen cases, and apparently equal to the control in only one."[1] Other observers also have found that injection of minute quantities of alcohol into hen's eggs, or the exposure of the intact eggs to alcohol fumes, results in the production of a striking number of defective chicks with various sorts of malformations, particularly of the nervous system and eyes. Eggs of sea urchins and fish have been found to produce many monstrosities when developing in water containing a little alcohol.

The effect of alcohol given by mouth, and thus more nearly reproducing ordinary human practices, has been studied by Arlitt,[2] in white rats, which seem to be among the few animals that can be induced to take alcohol in their food. She found that even so small an amount as 0.25 c.c. of alcohol daily greatly reduced the rate of growth of the animals, and decreased the duration of life. This and larger amounts, up to 2.25 c.c. daily, also produced partial or complete sterility in both sexes, as well as a large proportion of still-births and a progeny with a high infant mortality, these defects being exhibited by surviving offspring in subsequent generations. There is also a retardation in growth rate in the offspring of alcoholic rats, as Stockard found with guinea-pigs. Examination of the bodies of the alcoholized rats detected no evident anatomic changes in any of the important viscera, with the exception of the reproductive tissues.[3] The testicles of the alcoholized rats were found to exhibit almost constantly marked degenerative changes, affecting the steps of spermatogenesis in inverse order to their occurrence, so that for some time before sterility and complete azoospermia result, the animal is producing spermatozoa with all possible degrees of abnormality and deficiency. The possible relation of this abnormal spermatogenesis to the production of defective offspring is obvious, and the significance of the studies of alcoholism in laboratory animals is enhanced by the fact that identical selective effects of alcohol on the human testicle have been frequently described and studied by pathologists.

The particular interest in Mrs. Arlitt's work, however, lies in the study of the alterations in psychology produced by chronic alcoholism. Experimental psychology has developed methods for estimating mental capacity in lower animals, and the psychology of the white rat has been extensively investigated by means of maze problems. The animals are required to seek their food at the far end of a maze, and the capacity to learn the shortest route and to follow this route without error gives a measure of at least certain mental functions. It was found that rats which had learned their way through the maze retained this capacity after subsequent alcoholism, the tests being made before rather than after each indulgence in alcohol. That is, alcoholism did not remove a mental function already developed. On the other hand, if the animals were first alcoholized for sixteen days and then trained in the maze, they showed much less than normal ability to learn the problem, taking more trials and longer time, and making more errors, than normal animals of the same age. This mental deficiency is transmitted to the offspring, equally well by either the male or the female parent, so that rats of the second and third generations are usually inferior to normal animals in respect to their capacity to learn their way

INCREASE IN ANNUAL DUES

Elsewhere in this issue appears the report of a special meeting of the House of Delegates of the American Medical Association called to act on a proposition submitted by the Board of Trustees to increase the annual Fellowship dues. The House of Delegates modified the by-laws, increasing these dues from $5.00 to $6.00, the new arrangement to be effective for 1921. As explained in the minutes of the meeting of the House of Delegates, this increase is made necessary by the greatly increased cost of material and labor in the printing trade. Considering merely the amount of material contained in THE JOURNAL each week, even at the new rate THE JOURNAL is lower in price by far than any other scientific periodical, medical or otherwise, in the world. The increase is 20 per cent.—very small as compared with the increase in the subscription prices of other periodicals, especially those published by scientific organizations. The British Medical Association recently has increased its annual dues, which means subscription to the British Medical Journal, from $10.50 to $15.75. It may be well to recall that the income from THE JOURNAL supports the Association's activities in the interest of the medical profession and the public: for instance, the work of the Council on Pharmacy and Chemistry, of the Chemical Laboratory, of the Council on Medical Education and Hospitals, of the Council on Health and Public Instruction, and of the Biographical and Propaganda departments. Thus, when a physician pays $6.00 he is not only paying for THE JOURNAL, but also for the above enumerated enterprises and other activities in behalf of the medical profession and the public.

1. Stockard, C. R., and Papanicolaou, G. N.: J. Exper. Zool. **26**: 119, 1918.

2. Arlitt, Ada H.: The Effect of Alcohol on the Intelligent Behavior of the White Rat and Its Progeny, Psychological Monographs **26**, No. 4, 1919.

3. Arlitt, Ada H., and Wells, H. G.: The Effect of Alcohol on the Reproductive Tissues, J. Exper. Med. **26**: 769 (Dec.) 1917.

through the maze. Such experimental observations recall the fact that students of abnormal human psychology have repeatedly called attention to the importance of parental alcoholism in accounting for juvenile deficiency, and the same influence has been frequently noted in groups of cases of congenital physical defects. In the human subject the question always exists as to whether the alcoholism is not the result of inherited mental defects rather than the cause; furthermore, the offspring of alcoholics suffer not only in their ancestry, but also in their environment. With the white rat, however, these factors do not come in to complicate the evidence, and the observed results can be unquestionably attributed to the alcohol. Evidently alcohol has a selective toxic action on the germ cells, and before this has resulted in complete sterility there is a period in which defective spermatozoa and ova are formed that still have the capacity to produce offspring of varying degrees of abnormality. Furthermore, the germ cells of the offspring also exhibit more or less of the same deficiencies for at least two or three generations. We recently called attention to the fact that eye deficiencies produced in early embryos by specific antilens serum may be transmitted to subsequent generations.[4] Injuries produced in the germ cells by alcohol seem to be similarly transmissible, at least in experimental animals, and the same thing has been found true for other poisons, notably lead.

TOLERANCE TO MORPHIN

Every physician is familiar with the great decrease in susceptibility which persons are likely to acquire toward certain drugs when the dose is frequently repeated. It is often referred to as acquired tolerance, and is commonly exemplified in the case of substances that lead through their frequent use to the formation of drug habits. Opium, alcohol and tobacco have furnished the classic illustrations. How this peculiar tolerance is developed has long been a perplexing problem. Most of the "explanations" are vague hypotheses which have not stood the test of scientific experiment. To say that "there is an actual decrease in the protoplasmic sensitiveness to the drug," as in the case of nicotin, merely locates the place where the tolerance is developed in the tissues themselves; it does not explain the subtleties of the matter in any way. In some cases it has been maintained that tolerance means increased oxidative activity, whereby the substance in question is more readily destroyed through heightened chemical reaction; there are, however, few authentic instances of augmented metabolism of this character, which has been somewhat fancifully described as a "strengthening of the defenses of the organism."[5]

The modern studies of immunity and so-called immune reactions, demonstrating the undoubted production by the organism itself of substances that can specifically detoxicate the toxins of bacterial origin, have given a trend to new suggestions in regard to drug tolerance. May we not be dealing with the production of neutralizing substances engendered in the organism through the stimulus of circulating foreign substances of various sorts? Is there not a sort of antibody formation in the defense against noxious drugs? An affirmative answer was offered more than twenty years ago by Gioffredi.[6] It would be alike interesting and helpful, if true. The use of a protective serum or substance might become possible.

Although the corroborative evidence brought together in the intervening years has not been convincing, the possibility of a biologic immunity to morphin has never completely been lost sight of. In his reports on immunization to alkaloids, Gioffredi stated that while it was impossible to obtain immunity against the effects of cocain and atropin, he was able to obtain a serum from a morphin-tolerant dog which protected a second dog from almost twice the fatal dose of morphin. Presently other antiaggressins were postulated. Working in the pharmacologic laboratory of the University and Bellevue Hospital Medical College, Pellini and Greenfield[7] have come to the definite conclusion that "no substance is formed in the blood serum of a human being who has acquired a high tolerance to morphin, which is capable of conferring any degree of immunity to the toxic action of morphin on an animal into which it is injected." Furthermore, they have been able to show that the blood of a tolerant animal does not contain any protective substance against morphin. These findings may be disappointing because of their negative character. Nevertheless, they harmonize with the current trend of researches in immunology which, to quote the New York investigators, tend to make it more probable that serum immunity is produced only by proteins, and that the tolerance established to certain vegetable alkaloids is of a totally different nature.

AN UNSUSPECTED OCCASIONAL MENACE IN LOW PROTEIN DIETS

Modern experimental studies of the etiology of glycosuria have shown that, whereas the ordinary healthy person has a large tolerance for carbohydrate food, there are occasional persons who have a decidedly lowered capacity to utilize this group of nutrients. They represent a type of latent diabetes. If we conceive of diabetes as attributable to a "weakness" of the pancreatic function—a view which prominent students of the disease have lately championed—the effect of over-

4. The Experimental Production of Congenital Defects, editorial, J. A. M. A. **75**: 1346 (Nov. 13) 1920.
5. Greene, C. W.: Handbook of Pharmacology, New York, William Wood & Co., 1914, p. 17.
6. Gioffredi: Arch. ital. de Biol. **28**: 402, 1897; **31**: 398, 1899.
7. Pellini, E. J., and Greenfield, A. D.: Narcotic Drug Addiction, I. The Formation of Protective Substances Against Morphin, Arch. Int. Med. **26**: 279 (Sept.) 1920.

taxing this weakened organ can readily be understood. In this instance, glycosuria is likely to result; and as a forerunner of this condition, the sugar content of the blood may be increased above the normal limits.

By the partial removal of the pancreas, Allen has produced conditions in animals wherein no signs of glycosuria may arise unless diets very rich in carbohydrate are administered. If this unfavorable regimen is continued, it often happens that a condition of severer diabetes arises and downward progress ensues. Improper diet has transformed a latent diabetes or a prediabetic state into a grave menace. The same situations and sequences are likely to arise in human cases. Joslin [1] summarizes his extensive observations with the remark that while various factors are undoubtedly concerned in the production of human diabetes, clinical observations indicate that diet is an important one. It is generally recognized that there is a higher incidence of diabetes among those races or classes of people who use an excess of carbohydrate. Joslin adds, as others have observed, that in persons who might otherwise go through life with no signs of diabetes, an excess of starch in the diet may serve as an exciting cause of diabetes, and the degree of such excess may help to determine the earlier or later onset and the milder or severer type of the disorder. In other persons of this sort, as in the corresponding type of dogs, the pancreatic function is able to deal safely with as much starch as can be digested, but a sufficient excess of sugar is an effectual cause of diabetes.

Those who accept this version of the possible "stirring up of a latent tendency" will find wisdom in the recent warning of a possible danger in the low protein diet sometimes employed for therapeutic purposes in various diseases. A notable instance is suggested by the proposal to restrict the protein intake in the management of certain cases of psoriasis. It is said that this plan, followed by Schamberg [2] and his co-workers, has been extended to other dermatoses. In order to supply adequate energy to the patient, the lack of protein calories is likely to be made good by increasing the carbohydrate component of the diet in the first instances. Michael [3] has recently pointed out a danger of thereby affecting unfavorably such persons as may represent the "prediabetic" state just discussed. As he expresses it, to continue a prediabetic patient on a diet composed of large amounts of carbohydrates is tantamount to condemning that person to diabetes. Cases have been cited which seem to justify this fear.

Although the absence of glycosuria is not always an "index of safety," modern diagnostic technic has not left us in the lurch in ascertaining where danger may be hidden. The estimation of the sugar content of the blood, particularly after the ingestion of the diets under suspicion, is likely to give a dependable clue. The potential diabetes will usually manifest itself in the character of the hyperglycemia. Michael reminds us that by frequent blood sugar estimations, a record can be obtained which will determine whether the campaign is to be maintained or abandoned. Prediabetic patients should be told of their condition, its control and dangers, so that they may not unknowingly adopt a diet that is fraught with danger to them. Above all, the physician must learn to recognize the possibilities that a special diet poor in protein and rich in carbohydrate may represent for the welfare of his patient.

1. Joslin, E. P.: Treatment of Diabetes Mellitus, Philadelphia, Lea & Febiger, 1917, p. 80.
2. Schamberg, J. H.; Ringer, A. I.; Raiziss, G. W., and Kolmer, J. A.: Summary of Research Studies in Psoriasis, J. A. M. A. **63**: 729 (Aug. 29) 1914.
3. Michael, J. C.: A Menace in the Low Protein Diet, Arch. Dermat. & Syph. **2**: 455 (Oct.) 1920.

Current Comment

ACID FACTORS IN THE PRODUCTION OF PNEUMONIC LESIONS

Studies of the nature of the lesions produced by the war gases, many of which were chlorin compounds, have indicated that, in their penetration of the cells of the body, hydrochloric acid is evidently liberated. One is thus led to suspect the significance of this derivative in the production of the harmful effects that arise. The character of the morphologic damage produced in the lungs by inhalation of war gases has been extensively investigated, notably by Winternitz [1] and his collaborators. They have recently supplemented the earlier observations by the significant demonstration that intrabronchial insufflation of weak solutions of hydrochloric acid, and indeed of other acids both inorganic and organic, can call forth the same phenomena: intense edema and congestion of the lung with hemorrhage, dilatation of the alveolar ducts and bronchioles, hyaline necrosis of the epithelium of these structures, and various types of consolidation which are more frequently serofibrinous, but may be hemorrhagic or even purulent. In the cases in which more superficial injury occurs, a sterile pneumonia ensues and repair of the pulmonary damage begins quickly. Formation of granulation tissue and organization of the exudate is accompanied by the proliferation of epithelium. The war is over, and it is hoped that the use of the deadly war gases has passed forever. Nevertheless, there is a special, more permanent interest in the study of their effects because the pathologic condition of the lungs just described as characteristic of both the poisoning with war gases and the insufflation with hydrochloric acid closely resembles that recorded for the lung lesions in influenzal pneumonia.[2] Whether the analogy of an acid irritant factor also exists in the latter case remains to be clearly demonstrated.

1. Winternitz, M. C., et al.: Collected Studies on the Pathology of War Gas Poisoning, New Haven, Conn., Yale University Press, 1920. Winternitz, M. C.; Smith, G. H., and McNamara, F. P.: Effects of Intrabronchial Insufflation of Acid, J. Exper. Med. **32**: 199 (Aug.) 1920; Epithelial Proliferation Following the Intrabronchial Insufflation of Acid, ibid., p. 205.
2. Winternitz, M. C.; McNamara, F. P., and Wason, I. M.: Pathology of Influenza, New Haven, Conn., 1920.

HYPERTROPHY OF THE THYROID

The fact that a number of clinically unlike conditions may be accompanied by enlargement of the thyroid structures has frequently caused confusion in the minds of students of the ductless glands. Such enlargements may be found in cases both of underfunctioning and of overfunctioning of these endocrine organs. In recent years it has been demonstrated anew beyond peradventure, notably by David Marine and his co-workers in the goiter region of the Great Lakes, that reduction in the size of enlarged thyroids can be secured by administration of simple iodids. This phenomenon has been susceptible of demonstration on a large scale in the studies of children of school age at Akron, Ohio. When a large portion of the thyroid structures is extirpated by surgical intervention, a compensatory hypertrophy presently ensues. Loeb,[1] of the Washington University School of Medicine, St. Louis, has recently demonstrated that administration of iodin does not diminish the intensity of such hypertrophic changes; in fact, it may even somewhat accelerate them. As iodin definitely prevents or cures hypertrophic goiter, it seems clearly demonstrated again that the enlarged gland condition known as endemic goiter, and compensatory hypertrophy of the thyroid are essentially different conditions. Perhaps the real hypertrophic gland found in exophthalmic goiter is in some respects analogous to the product of a true compensatory hypertrophy.

GRADUATE TRAINING IN THE SPECIALTIES

The present trend toward specialization makes it of particular importance that some means be established of ascertaining and certifying those who have attained training and skill in any particular specialty. The action of the Council on Medical Education and Hospitals in appointing committees to prepare suggestive minimum courses of training in the specialties is therefore not only opportune but meets an important need in medical education. The movement also is meeting with general approval, as evidenced by the promptness and enthusiasm with which physicians have consented to act on the various committees. Attention has already been called[2] to the action taken by the opthalmologists, who have prepared a minimum standard of training for those who wish to specialize in ophthalmology. They have established an examining board which is granting certificates to those who have completed the work and passed the tests of efficiency. More recently, and since the Council established its special committees, a report has been received from a committee composed of members of the several societies of otolaryngologists of North America, which has likewise prepared a minimum standard for physicians intending to specialize in otolaryngology. Instead of establishing an examining board and granting certificates, however, this committee suggests that a suitable degree be granted by graduate departments of universities to those who have proved their efficiency. On another page[3] appears a report of a preliminary conference on graduate medical education, with special reference to plans of procedure to be followed by the various committees. The final reports of the committees will not only provide minimum standards of training for specialists and throw an important side-light on the present undergraduate curriculum, but also aid in the development of graduate medical education. It is hoped that they will lead to a more rapid development of the abundance of clinical teaching material in many hospitals in this country which at present is unorganized and unused.

1. Loeb, Leo: Studies on Compensatory Hypertrophy of the Thyroid Gland, IV, The Influence of Iodine on Hypertrophy of the Thyroid Gland, J. Med. Res. **41**: 481 (May) 1920.
2. Graduate Courses for Training of Specialists, J. A. M. A. **75**: 1220 (Oct. 30) 1920.

WHAT IS ADIPOCERE?

Corpse wax, or adipocere, has been the subject of scientific controversy and discussion since the first description of the substance by Fourcroy in 1789. As is well known, it may be formed when dead bodies or parts of bodies are buried in moist places or are kept in contact with water, the muscles and soft parts being replaced by a mass made up of a mixture of fatty acids and their derivatives. The long defended view that adipocere represents the result of a direct postmortem metamorphosis of protein substance into fat has virtually been abandoned. Adipocere occurs almost exclusively in fat bodies, so that its formation from the original fats of the body now seems most likely. Part of the difficulty in determining the genesis of the product lies in the unlike composition that has been ascribed to samples from different sources. Ammonium and calcium soaps have been represented along with the fatty acids present. The quantity of residual nitrogenous components has been variable in the reports. A specimen analyzed by Ruttan and Marshall[4] consisted almost entirely (94 per cent.) of substances soluble in ether. More recently, Florence[5] has examined a sample of adipocere removed from a cemetery at Lyons, France, half a century ago. It contained about 10 per cent. of nitrogenous material apparently representing retained fragments of connective tissue of the muscles involved. The remainder of the muscle protein had disappeared. True fats, that is, glycerids of the fatty acids, were present in abundance. It would be easy to assert for the latter an origin from "metamorphosed protein," thereby suggesting an instance of fatty degeneration. It is equally logical, however, to assume the gradual disintegration and solution of the nonfat muscular parts of the original tissue whereby only the collagenous and adipose portions of the organs were left with some degree of integrity. More elaborate hypotheses are scarcely justified at present.

3. Graduate Medical Education: Conference of the Council on Medical Education and Hospitals, this issue, page 1443.
4. Ruttan, R. F., and Marshall, M. J.: The Composition of Adipocere, J. Biol. Chem. **29**: 319 (March) 1917.
5. Florence, G.: Etude d'un cas d'adipocire, Bull. de la Soc. chim. biol. **1**: 185 (Nov.-Dec.) 1919.

The Value of Radium.—It is now to be taken as proved that radium is of considerable value in certain forms of cancer, and that while surgery remains our chief reliance in this disease, radium in combination with surgery undoubtedly increases the prospective cure.—*Canad. M. A. J.*, November, 1920.

Association News

HOUSE OF DELEGATES

SPECIAL SESSION

CHICAGO, ILL., NOV. 11-12, 1920

First Meeting—Thursday Afternoon, November 11

The House of Delegates met in special session at the headquarters of the American Medical Association, Chicago, at 5 p. m., and was called to order by the Speaker, Dr. Dwight Murray of Syracuse, N. Y.

The Secretary stated that a quorum was present.

The Speaker declared the House of Delegates duly constituted and open for business. He stated that the only business which could be considered at this special meeting of the House was that specified in the call.

An emergency exists which makes it advisable to call a special session of the House of Delegates. The emergency is the necessity of changing Chapter XVII of the By-Laws so that it shall call for seven dollars as the annual dues instead of five dollars as at present.

The Secretary reported that along with the letter dated Sept. 15, 1920, issued on the authority and by the direction of the Board of Trustees, there was mailed to each member of the House as constituted at the New Orleans session one form for a vote by mail on the question of increasing the Fellowship dues, and another for requesting a special meeting of the House of Delegates. The letter of September 15 reads:

To the Members of the House of Delegates
of the American Medical Association:

In its report to the House of Delegates at the New Orleans meeting of the Association, the Board of Trustees incorporated these two paragraphs under "Increased Expenses":

> The steadily increasing cost of production is likely to cause serious concern if it continues much longer. As an illustration we might refer to the price of paper used in THE JOURNAL. A reference to the auditor's report for 1918 will show that paper for the THE JOURNAL that year cost approximately $162,000. Last year—1919—it was over $217,000—an increase over the preceding year of approximately $55,760. There was an increase in circulation, but this was small as compared with the increase in cost of paper. We entered this year with a still further increase; at the lowest estimate, our paper for the current year will cost in the neighborhood of $35,000 more than last year, even though there should be no further increase. Wages in the printing trade are still advancing; an increase that went into effect last February, 1920, adds at least $22,000 to the pay in the printing department. The increase in these two items alone—paper and labor in the mechanical department—will add at least $57,000 to the expense this year. In addition there is a steady increase in the wages for all the other help—stenographers, typists, clerks, etc.
>
> While there is no immediate cause for anxiety, it is well for us to realize that we must be prepared for whatever the future may have in store. It may be necessary either to increase the subscription price of THE JOURNAL—say $1.00 a year—or to reduce its size. However, this is for the future. Your attention is called to these matters that you may know the conditions that have developed and which are developing.

Although, during the last three or four years, there has been a steady increase in wages, in cost of paper and of everything used in the printing line, it was the earnest desire of the Trustees, and other officers of the Association, to get along without either raising the price of THE JOURNAL or reducing its size. However, since the preparation of the last report of the Trustees, from which the above quotation is made, there have been three increases in the cost of paper—one covering March and April, one covering May to August, and a third went into effect September 1. These increases amount approximately to a 25 per cent. increase since the first of March. Based on these increases, we estimate that our paper for this year will cost between $75,000 and $80,000 more than last year.

On August 25, there was another increase of $5.00 a week affecting compositors, linotype operators, pressman, pressfeeders, etc.; this makes an increase of $10.00 a week since the first of this year. Of course there also has been an increase in the scale for office employees. We cannot estimate the future from the past, but from present prospects no decrease in these expenses is to be expected.

Summarizing: Our paper today is costing 154 per cent. more than at the end of 1914; and labor in the mechanical departments has increased approximately 135 per cent. in the same time.

It is now realized that unless the price of THE JOURNAL is raised (two dollars is suggested) for 1921, it will be necessary to go very deeply into our reserve fund—and even this would not suffice for long if present conditions continue. It is, therefore, necessary that the situation be met immediately; the great majority of the Fellows remit during the first two or three months of the year, and if action on this matter is postponed until the Boston meeting it will mean that there will be practically no increase in receipts for dues or subscriptions during the year 1921, since any action taken at the annual session could not be made retroactive. The Trustees, therefore, are unanimously of the opinion that a special meeting of the House of Delegates should be called to consider modification of the following by-law so as to permit of increasing the dues and subscription, and that this meeting should be held in time to have the new rates promulgated not later than the first of December of this year:

> CHAPTER XVII.—Annual Fellowship Dues: The annual Fellowship dues shall be five [seven] dollars, payable in advance on the first day of January of each year, of which not less than four [six] dollars shall be credited to the subscription for one year to THE JOURNAL.

It is proposed that the following modification be made in the above Chapter:

> Change the word "five" in the first line to "seven," and the word "four" in the third line to "six."

If any further changes are considered necessary they can be presented at the meeting in Boston next June.

It is suggested that the opportune time for such a meeting of the House of Delegates would be in connection with the meeting of State Secretaries, which is to be held at the Association headquarters in Chicago, November, 11-12; at least ten of the state secretaries are also delegates. If the meeting of the House of Delegates were held at that time it would insure the presence of at least ten delegates, and it should, therefore, not be difficult to have a quorum in attendance.

Special sessions of the House of Delegates are provided for in Section 2, Chapter III of the By-Laws:

> Special sessions of the House of Delegates shall be called by the Speaker on written request of twenty-seven or more delegates, representing a majority of the constituent associations. When a special session is thus called, the Secretary shall mail a notice to the last known address of each member of the last House of Delegates at least twenty days before such special session is to be held, in which notice shall be specified the time and place of meeting and the items of business to be considered. No other busines shall be transacted at the special session than that specified in the call.
>
> QUORUM.—Twenty voting members of the House of Delegates shall constitute a quorum.

Enclosed will be found two slips—one for a mail vote on the proposition of modifying the by-laws to increase the annual dues; the other a petition to the Speaker of the House of Delegates to call a special meeting for the purpose specified. The petitions will be transmitted to the Speaker by the Secretary of the Association. As the time is short, if the meeting is to be called on the dates mentioned above, will you please act promptly? Stamped, directed envelope is enclosed for your convenience.

The mail vote on the proposition of increasing the annual dues is simply to obtain an expression of the opinion of all the members of the House of Delegates for the benefit of those who may attend the special session; it has no legal force.

This communication is issued on the authority and by direction of the Board of Trustees of the American Medical Association.

ALEX. R. CRAIG,
Secretary, American Medical Association.

FRANK BILLINGS,
Secretary, Board of Trustees of the A. M. A.

GEORGE H. SIMMONS,
Editor and General Manager.

VOTE SLIP AND PETITION

The form for the vote by mail and that for the request for a special meeting of the House of Delegates were as follows:

VOTE SLIP. I ..... favor modifying Chapter XVII of the By-Laws of the American Medical Association increasing the annual dues to seven dollars per annum, to be effective for 1921.

.....
Delegate Representing the Constituent Association of
.....

PETITION.—*To the Speaker of the House of Delegates, American Medical Association:* An emergency exists which makes it advisable to call a special session of the House of Delegates. The emergency is the necessity of changing Chapter XVII of the By-Laws so that it shall call for seven dollars as the annual dues instead of five dollars as at present. Please regard this as a petition for you to call a special meeting of the House of Delegates in Chicago, November 11-12, 1920, for the object specified.

.....
Delegate Representing the Constituent Association of
.....

The replies are itemized as follows: After the name of each member of the House of Delegates, "A" indicates a vote in favor of the modification of the By-Law; "N" indicates a negative vote, and "U" indicates that the vote was not signed. "P" means that the petition for the special meeting was signed; "O" indicates that the petition was not signed.

Alabama: S. G. Gay, N-O; S. W. Welch, A-P; F. W. Wilkerson, A-P. *Arizona:* John W. Flinn, A-P. *Arkansas:* William R. Bathurst, A-P. *California:* E. C. Fleischner, A-P; E. S. Kilgore, N-O; C. Van Zwalenburg, A-P. *Colorado:* J. N. Hall, A-P; Gerald B. Webb, A-P. *Connecticut:* J. E. Lane, A-P; Walter R. Steiner, A-P. *District of Columbia:* William Gerry Morgan, A-P. *Florida:* John S. Helms, A-P. *Georgia:* H. H. Martin, U-O. *Illinois:* R. J. Coultas, A-P; L. Hektoen, A-P; M. L. Harris, A-P; Charles J. Whalen, U-P; W. F. Grinstead, U-P; Hugh N. MacKechnie, N-P. *Indiana:* Joseph R. Eastman, A-P; Albert E. Bulson, Jr., A-P; Charles D. Humes, A-P. *Iowa:* M. N. Voldeng, U-O; W. B. Small, U-P. *Kentucky:* D. M. Griffith, A-P; A. T. McCormack, A-P. *Maryland:* Thomas S. Cullen, A-P; Randolph Winslow, A-P. *Massachusetts:* H. G. Stetson, A-P; F. B. Lund, A-P;

E. F. Cody, A-P; Gilman Osgood, A-P; J. F. Burnham, A-P. *Michigan:* A. W. Hornbogen, A-P; F. C. Warnshuis, A-P; Guy L. Connor, A-P; J. D. Brook, A-P. *Minnesota:* W. H. Magie, A-P; J. W. Bell, A-P. *Missouri:* Robert M. Funkhouser, A-P; Franklin E. Murphy, A-P; C. R. Woodson, A-P; S. L. Baysinger, A-P. *Nebraska:* Joseph M. Aikin, A-P; Le Roy Crummer, A-P. *New Hampshire:* D. E. Sullivan, A-P. *New Jersey:* G. E. Reading, N-O. *New York:* D. H. Murray, A-P; Frederic E. Sondern, A-P; J. Richard Kevin, A-P; Arthur J. Bedell, A-O; James F. Rooney, A-P; William F. Campbell, A-P; E. Eliot Harris, A-P; Nathan B. Van Etten, A-P; A. C. Prentice, A-P; T. C. Chalmers, A-P. *North Carolina:* John Q. Myers, A-P. *Ohio:* J. H. J. Upham, A-P; B. R. McClellan, N-(considers special session unnecessary); C. D. Selby, A-P; George E. Follansbee, U-P; Granville Warburton, A-P. *Oklahoma:* LeRoy Long, A-P; L. S. Willour, A-P. *Oregon:* J. A. Pettit, A-P. *Pennsylvania:* Edward B. Heckel, A-P; John D. McLean, A-P; William F. Bacon, A-P; George R. S. Corson, A-P; Herbert B. Gibby, A-P; Lewis H. Taylor, A-P; William B. Scull, A-P; William H. Mayer, A-P; Jefferson H. Wilson, U-P. *Porto Rico:* Jacinto Aviles, A-P. *Rhode Island:* Albert H. Miller, A-P. *South Carolina:* Edgar A. Hines, A-P. *South Dakota:* J. F. D. Cook, A-P. *Texas:* W. B. Russ, A-P; W. W. Ralston, A-P; J. Mark O'Farrell, A-P; Holman Taylor, A-P. *Virginia:* Southgate Leigh, A-P; W. E. Anderson, U-P; Joseph T. Buxton, A-P. *Washington:* D. E. McGillivray, A-P; S. E. Lambert, A-P. *Wisconsin:* H. M. Brown, A-P; Rock Sleyster, A-P; Charles H. Lemon, A-P. *United States Army:* Frederick F. Russell, A-P. *United States Navy:* Frank E. McCullough, A-P. *United States Public Health Service:* J. W. Schereschewsky, A-P. SECTIONS: *Surgery, General and Abdominal:* Raymond P. Sullivan, A-P. *Laryngology, Otology and Rhinology:* John F. Barnhill, A-P. *Diseases of Children:* Isaac A. Abt, A-P. *Pathology and Physiology:* E. R. LeCount, A-P. *Nervous and Mental Diseases:* Hugh T. Patrick, A-P. *Orthopedic Surgery:* John Ridlon, A-P. *Gastro-Enterology and Proctology:* Alois B. Graham, A-P.

No replies were received from the following: *Arkansas:* R. C. Dorr. *Georgia:* S. R. Roberts. *Iowa:* John C. Rockafellow. *Kansas:* W. S. Lindsay; C. W. Stahl. *Kentucky:* John G. South. *Louisiana:* W. H. Seemann; Clarence Pierson. *Maine:* B. L. Bryant. *Missouri:* E. S. Smith. *Montana:* E. W. Spottswood. *New York:* E. L. Hunt. *North Dakota:* E. A. Pray. *Tennessee:* L. A. Yarborough; E. T. Newell. *Texas:* E. H. Cary. *Utah:* T. J. Howells. *West Virginia:* Henri P. Linsz; Chester R. Ogden. *Wyoming:* H. R. Lathrop. SECTIONS: *Ophthalmology*—L. M. Francis. *Preventive Medicine and Public Health*—C. St. Clair Drake.

SUMMARY OF REPLIES RECEIVED

There were 103 replies: twenty-two members of the House did not answer. Ninety voted in favor of the proposed amendment; five votes were negative, and eight vote slips were returned unsigned. The petition calling for a special meeting of the House of Delegates was signed by ninety-six delegates, including delegates from thirty-three constituent associations; six delegates who replied did not sign the petition, and one delegate wrote on the form "not favorable to any change and therefore no necessity for a special session."

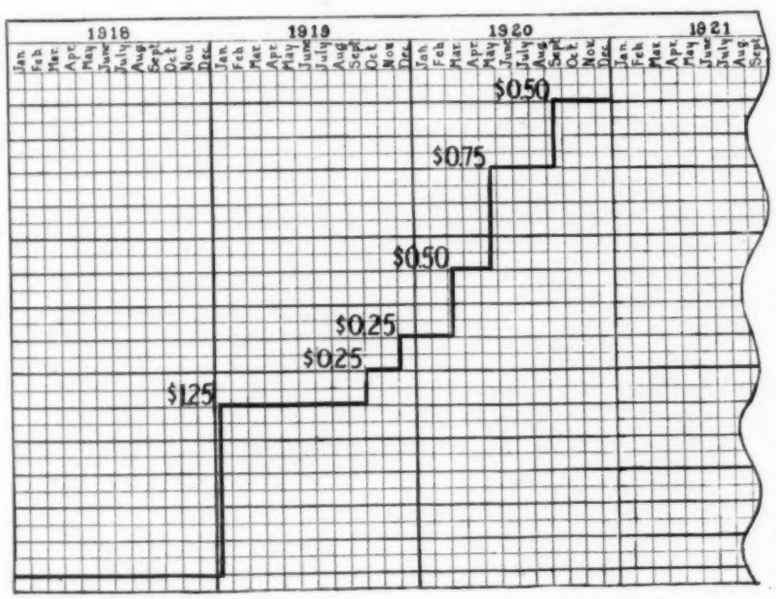
The Secretary further reported that the provisions of the by-law for the call of a special meeting of the House of Delegates had been complied with.

Dr. Billings, secretary of the Board of Trustees, stated that at a meeting of the Executive Committee of the Board that day Dr. Simmons, the manager of the organization, and he were authorized to present the matter, and asked that Dr. Simmons be heard first.

STATEMENT OF DR. SIMMONS

It is not necessary to tell those of you who read magazines, newspapers or periodicals that conditions in the publishing business have developed during the last six or eight months in a way that was never dreamed of, making it necessary for practically all periodicals to increase their subscription prices. I do not believe there is a periodical of any description published that has been sent out at as low a figure, considering its size, as has THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. In its report to the House of Delegates last April the Board of Trustees called attention to the increased cost of publication.

"While there is no immediate cause for anxiety, it is well for us to realize that we must be prepared for whatever the future may have in store. It may be necessary either to increase the subscription price of THE JOURNAL—say $1.00 a year—or to reduce its size. However, this is for the future. Your attention is called to these matters that you may know the conditions that have developed and which are developing."



INCREASE IN THE COST OF PAPER

This chart shows graphically the increase in the cost of paper during the last two years. Each two squares vertically represent a rise of 25 cents per 100 pounds of paper. The rises occur in multiples of 25 cents. A rise of 25 cents per 100 pounds equals $5 per ton. THE JOURNAL is using approximately 1,700 tons per year. *Hence each rise of 25 cents per 100 pounds means an added cost for twelve months of $8,500.* In January, 1919, there was a rise of $1.25 per hundred; in September, 1919, another rise of 25 cents per hundred and in December, 1919, another rise of 25 cents per hundred. In March, 1920, there was an increase of 50 cents per hundred; in May, 1920, 75 cents per hundred and in September 50 cents per hundred; thus, within six months during 1920, there was a rise of $1.75. The cost of paper for THE JOURNAL for twelve months at the present rate would be $59,500 more than it would be at the rate with which we entered 1920.

At that time the Board of Trustees had discussed the question whether they should not ask for an increase at once and it was decided to wait. [See charts for increase in cost of paper and labor since the report was prepared — February, 1920.]

We are now losing money and have been since the last two increases in the cost of paper and labor, although the proceeds during the first three months, that is, before the last two increases went into effect, will probably offset the losses which have occurred during the last three or four or five months; at the end of the year we hope that we will not be far or any behind.

During the last week we have been going over our financial condition very carefully to see if it is necessary to increase $2, as has been proposed, or whether $1 will be a sufficient increase. After studying the matter in all its phases, the Executive Committee of the Board of Trustees agrees that it will be better to increase only as much as is absolutely necessary now; and if it becomes necessary, to increase again later. The trustees, therefore, advise that the by-law be modified to increase the dues one dollar.

The American Pharmaceutical Association on November 3 increased their subscription price from $5 to $7.50. I read from a circular issued a month ago by the American Chemical Society:

At last it has become necessary to increase the Society dues. We are practically the only Society and have about the only scientific publication in the world that has not already done this. We have been able to put it off this long, solely owing to the rapid increase in our membership. The cost of labor and printing has now increased too rapidly for even the American Chemical Society to continue on its ten-dollar basis. Since 1916 the cost of the journals of the Society has more than doubled, and this year the Society's deficit is estimated by the Finance Committee at $27,000. The estimated expense per individual member for 1920, including all subscribers on the same basis as members and

including net advertising income, shows an expense per member of $14.97. These figures indicate at once the necessity of increasing our dues to $15.00, as was the practically unanimous vote of the Council at Chicago.

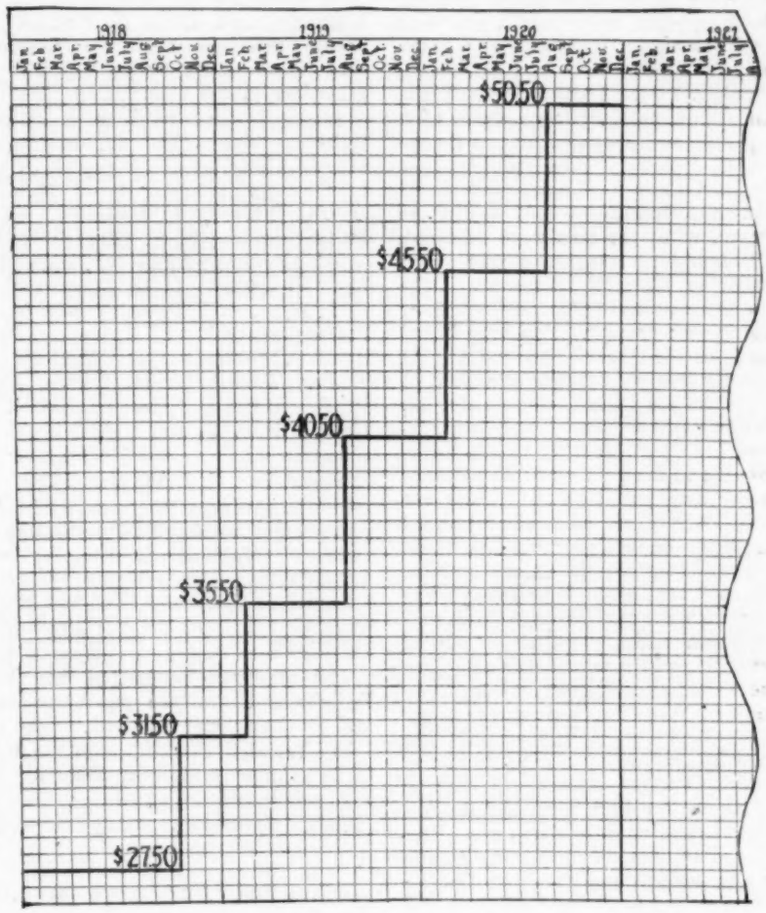
The American Chemical Society and the American Pharmaceutical Association increased their dues 50 per cent. We are proposing an increase of 20 per cent.

Some of you have received this telegram from the Wayne County, Michigan, Medical Society:

Whereas an effort is being made by the American Medical Association to raise the dues two dollars per annum and whereas as a perusal of the last financial report of said association would tend to show that such an increase in dues is not necessary at this time, therefore be it resolved by the Wayne County Medical Society of Detroit, Michigan, that an increase of dues in the American Medical Association at this time is not justified; further that a copy of this resolution be immediately telegraphed to the delegates of the Michigan State Medical Society to the American Medical Association and to the President, Secretary and Board of Trustees of the American Medical Association. Passed at special meeting November 8, 1920. No sig.

Evidently the Wayne County Society based its action on the New Orleans report of the Board of Trustees to the House of Delegates. This report covered the year 1919. It was written late in February. The Wayne County Society did not appreciate that there were two big increases in the wage scale of printers, one for March and another for August, each for $5 per week, making an increase of the weekly wage scale in the printing trade of $10 within six months. It also did not take into consideration the increase in the price of paper during the year. In March, there was an increase of 50 cents; in May, an increase of 75 cents, and in September, an increase of 50 cents per 100 pounds. This increase may sound large or small as one looks at it. We are using approximately 1,700 tons of paper a year. Twenty-five cents per 100 pounds is $5 a ton, so that each 25 cent increase means $8,500 added to the paper bill for the year. From March to September the increase amounted to $1.75 a hundred pounds. This means that our paper bill would be nearly $60,000 per annum more than at the price we paid during January and February, 1920.

Some have wondered why we should have to raise just at the time when prices seem to be falling. The answer is that both labor and paper would have to come down a good deal, at least to the price of January, 1920, before we could hope to publish THE JOURNAL at $5 a year without a loss. The probability is that labor in the printing trade, which is very closely organized, will not come down, at least for many months, and even if it does, we may not expect it to drop back to the price of January, 1920. From the general outlook in regard to paper pulp, we cannot hope for much reduction in the price of paper again, certainly not to what it was in January, 1920.



INCREASE IN THE COST OF LABOR

This chart shows graphically the increase in the cost of labor in the printing trades during 1918, 1919 and 1920. It is based on the average weekly wage received by compositors, press feeders and pressmen. Each two squares vertically represent a rise of $1 per week. In October, 1918, there was a rise of $4; in February, 1919, $4; in August, 1919, $5; in February, 1920, $5 and in August, 1920, $5. It will be noted that we entered 1920 with an average weekly wage for these three groups of $40.50. The rise in February, 1920, of $5 made the weekly wage $45.50, and the rise in August, 1920, of $5 made it $50.50 per week—the present wage. Estimating on the number of men employed in these three groups alone—[not including bindery workers, machinists, cutters, porters and general help in the printing department, all of whom have had proportionate increases]—the increase to compositors, press feeders and pressmen for 1921 would be $38,060 more than we would have paid at the rate with which we entered 1920.

MOTION BY DR. SONDERN

Dr. Sondern, New York, moved that Chapter XVII of the By-Laws, which reads as follows, "The annual Fellowship dues shall be five dollars, payable in advance on the first day of January of each year, of which not less than four dollars shall be credited to the subscription for one year to THE JOURNAL," be changed as follows: "The annual Fellowship dues shall be six dollars, payable in advance on the first day of January of each year, of which not less than five dollars shall be credited to the subscription for one year to THE JOURNAL." Seconded.

The resolution was referred to the Committee on Amendments to the Constitution and By-Laws, as constituted at the New Orleans meeting, for report the following morning.

The Secretary called the roll of the Reference Committee on Amendments to the Constitution and By-Laws as constituted at New Orleans as follows: Chairman, Rock Sleyster, Wisconsin, present; Texas, W. B. Russ, absent; South Carolina, E. A. Hines, present; Indiana, A. E. Bulson, absent; Pennsylvania, Edward Heckel, absent.

The Speaker made the following appointments in the place of the absent members: Dr. Holman Taylor of Texas, Dr. L. H. Taylor of Pennsylvania, Dr. C. St. Clair Drake of the Section on Preventive Medicine and Public Health.

STATEMENT OF DR. BILLINGS

Dr. Billings, secretary of the Board of Trustees, then made the following statement: In behalf of the Board of Trustees I desire to make a statement supplemental to that of Dr. Simmons. The Board of Trustees appreciated what it meant to call a special session of the House. It did not do this without thought. Indeed, this matter was discussed by the Executive Committee of the Board in August but no action was taken at that time. I presume you know that more than a year ago the Board of Trustees created an Executive Committee of three and that that Executive Committee meets in Chicago at

the Headquarters of the American Medical Association each month and goes over the business of the organization. The minutes of the Executive Committee are sent promptly to each member of the Board. The actions of the Executive Committee are confirmed finally by the full Board which has been in touch, therefore, with the business of the Association. The Executive Committee has had reports from the manager each month so that it has been able to appreciate the problems that it has had to contend with from time to time.

Some of you entertain the opinion that the American Medical Association is rich. It has a reserve fund, but you will remember probably that this House took action approving the rebuilding of the old building to the north of the building in which this meeting is held and that more than a year ago you authorized the Board of Trustees to go ahead and build. Accordingly, plans were drawn by architects and were submitted to the Board in October, 1919. These general plans were approved and the architects authorized to go ahead with the working out of blue prints and specifications for submission to the Board at its February meeting. At that meeting the architects submitted their final plans and specifications and estimated that the building would cost from $280,000 to $300,000. However, when the bids were received, the lowest cost was $420,000 and no assurance was given that this would hold if labor or material increased. Consequently, when these facts were presented to the Board, it decided to postpone building for the present. You have heard the statement of the manager of the Association and I hope you have appreciated what he has said about the cost of paper. Every economic measure has been used to carry on the business of the Association without loss. There are certain state journals that have been published by the Association press, but it was impossible to keep on with the printing of these and do justice to our own publications. There are those among you who wish to have an obstetrical journal published. The present facilities do not permit. We must have the reserve fund for a building for the future and we must give you THE JOURNAL as it was given to you before the high prices. If you have heard what the manager said, you will know that we have cut out reading matter to put in advertising matter to prevent loss, which is a bad thing to do. We had to adopt such a measure to prevent serious loss.

Why call you at this time? Why not wait until June? Because if the increase in the dues were postponed until the Boston session, the increased income would not be available until January, 1922. Therefore, if we would have the benefit of this increased amount of money for 1921, a special session of the House was necessary to pass on it at this time. The proposition has been presented to you now by your Board and by your manager after due thought and consideration, as a measure necessary to preserve the working capital of the Association and to carry on its business without loss.

On motion of Dr. A. T. McCormack, Kentucky, duly seconded and carried, the House adjourned until 8:30 Friday morning, November 12.

Second Meeting—Friday Morning, November 12

The House of Delegates was called to order at 8:30 a. m. by the Speaker.

The Secretary reported a quorum present.

Dr. Rock Sleyster, Wisconsin, Chairman, presented the following report of the Committee on Amendments to the Constitution and By-Laws:

In view of the large favorable vote by mail approving the raise in dues to seven dollars, and in view of the facts presented to this body by the manager and Board of Trustees,

Your Committee recommends the approval and adoption of the amendment to Chapter XVII of the By-Laws now before the House of Delegates and reading when changed according to recommendation as follows:

CHAPTER XVII.—ANNUAL FELLOWSHIP DUES. The annual Fellowship dues shall be six dollars, payable in advance on the first day of January of each year, of which not less than five dollars shall be credited to the subscription for one year to THE JOURNAL."

We recommend that the change be effective January 1, 1921. We further recommend that this action of the House of Delegates be given immediate and wide publicity by the Board of Trustees through THE JOURNAL and otherwise and that the secretaries of the constituent state associations be requested to aid in furthering this publicity.

E. A. HINES,
LEWIS H. TAYLOR,
HOLMAN TAYLOR,
C. ST. CLAIR DRAKE,
ROCK SLEYSTER, Chairman.

It was moved and seconded that the report of the Reference Committee be adopted.

A general discussion followed. Dr. C. J. Whalen, Illinois, and Dr. W. B Small, Iowa, spoke in opposition to the adoption of the report and Dr. Small moved that the report be laid on the table. This was seconded by Dr. Whalen, but the motion was lost. The discussion was then continued. The adoption of the report of the Reference Committee was supported by Drs. H. M. Brown, Wisconsin; Holman Taylor, Texas; J. H. J. Upham, Ohio; Randolph Winslow, Maryland; John Ridlon, Section on Orthopedic Surgery; W. C. Phillips of the Board of Trustees; Frederic Sondern, New York; Le Roy Crummer, Nebraska; A. T. McCormack, Kentucky, and Hugh T. Patrick, Section on Nervous and Mental Diseases. Drs. Whalen and Small spoke a second time opposing the proposition and Dr. Small called for the recording of the vote.

The ayes and nays were called and the vote was as follows: Ayes—Drs. W. R. Bathurst, Arkansas; W. G. Morgan, District of Columbia; R. J. Coultas, M. L. Harris, L. Hektoen, Illinois; A. T. McCormack, Kentucky; B. L. Bryant, Maine; R. Winslow, Maryland; J. F. Burnham, Massachusetts; F. C. Warnshuis, Michigan; E. W. Spottswood, Montana; LeRoy Crummer, Nebraska; D. E. Sullivan, New Hampshire; D. H. Murray, F. E. Sondern, A. J. Bedell, E. L. Hunt, A. C. Prentiss, New York; J. H. J. Upham, G. E. Follansbee, Ohio; L. H. Taylor, Pennsylvania; E. A. Hines, South Carolina; J. F. D. Cook, South Dakota; Holman Taylor, Texas; H. M. Brown, Rock Sleyster, Wisconsin; R. P. Sullivan, Surgery, General and Abdominal; H. T. Patrick, Nervous and Mental Diseases; J. Ridlon, Orthopedic Surgery—29.

Nays—Drs. C. J. Whalen, Illinois; W. B. Small, Iowa—2.

In attendance at the meeting held Thursday afternoon but not present at the Friday meeting: Drs. J. N. Hall, Colorado; H. MacKechnie, Illinois; W. H. Magie, Minnesota; J. H. Wilson, Pennsylvania; E. H. Cary, Texas; I. A. Abt, Diseases of Children; E. R. LeCount, Pathology and Physiology; C. St. Clair Drake, Preventive Medicine and Public Health—8.

The chairman announced that the recommendation of the Reference Committee on Amendments to the Constitution and By-Laws was adopted by the House.

Dr. Wendell C. Phillips of the Board of Trustees and Dr. G. H. Simmons, General Manager and Editor of THE JOURNAL, addressed the House.

On motion duly seconded and carried the House adjourned.

DR. RUDOLPH MATAS BECOMES VICE PRESIDENT

At the recent session of the Board of Trustees held in Chicago, Dr. Rudolph Matas, New Orleans, was elected vice president of the American Medical Association, succeeding Dr. Isadore Dyer, recently deceased.

CONFERENCE OF SECRETARIES OF CONSTITUENT ASSOCIATIONS

A conference of the secretaries of the constituent associations was held at the headquarters of the American Medical Association on Thursday and Friday, November 11 and 12, with thirty-five secretaries in attendance. Morning and afternoon sessions were held each day which were devoted to the discussion of measures for perfecting our organization, the consideration of possible disintegrating forces, the supervision of members in the county, state and national bodies, the *Bulletin of the American Medical Association* and suitable emoluments for state association secretaries. Graduate study work to be conducted in connection with the scientific programs of the county, district and state organizations was fully discussed in order to determine how this work can be developed in a practical manner. Reports were submitted of clinics, institutes and similar gatherings which are now being conducted by constituent associations either independently or in cooperation with medical schools, state boards of health,

organizations for the prevention of disease and societies having similar objects. A plan for further developing cooperation between the organization of the medical profession and other institutions having as its object the making available of graduate study to members of the medical profession was an interesting feature of the meeting. Economic and social opportunities and obligations of the medical profession were topics that were also considered.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

Clinic Organized.—The organization of the Cooper Clinic has been announced, with offices at Fort Smith, under direction of Dr. St. Cloud Cooper. Other members of the staff are Drs. Marion E. Foster, Sidney J. Wolfermann, William R. Klingensmith, Aubrey C. Belcher, Holman B. Thompson and Davis W. Goldstein.

CALIFORNIA

Accused of Violating Medical Practice Act.—"Dr." C. E. Walker and wife of Grass Valley, Nevada County, were hailed into court recently to answer a charge of practicing medicine without licenses, according to report, The Walkers maintain that they do not practice or prescribe medicine but teach the rules of health by means of diet, exercises and baths.

Appointment of Health Officers.—Dr. Edwin E. Endicott has been appointed physician of Amador County, to succeed Dr. Alexander M. Gall, resigned.——Dr. J. Gordon Mackay, Auburn, has been reappointed as physician of Placer County. ——Dr. Henry C. Brown has been appointed city health officer of San Jose.——Dr. August Cavagnaro, Stockton, has been reappointed health officer of San Joaquin County.

CONNECTICUT

Unveiling of Yale War Memorial Tablet.—A memorial tablet erected by Yale University in honor of the 225 graduates who lost their lives in the World War will be dedicated by formal exercises in Woolsey Hall, November 21, at 3 p. m. President Hadley will make the invocation and Hon. Henry L. Stimson, former secretary of war, will deliver the principal address.

Joint Meeting of Medical Societies.—The Connecticut State Medical Society held a joint session with the Middlesex County Medical Association at the State Hospital in Middletown, October 15, under the presidency of Dr. George Blumer, New Haven. Dr. Clarence Floyd Haviland, superintendent of the State Hospital, was the host at a luncheon given to the visiting physicians.

FLORIDA

State Establishes Field Ambulatory Clinics.—Dr. Ralph N. Greene, state health commissioner, has announced plans for the organization of field ambulatory clinics which will carry the lesson of public health to every home in the state. The clinics will be thoroughly equipped to offer attention for eye, ear, nose and throat and dental diseases, as well as treatment for hookworm disease. Headquarters of the field organizations will be established at the different county seats where the clinics will be conducted with the cooperation of district health officers.

ILLINOIS

Chiropractor Fined.—A report from the Department of Registration and Education states that Karl J. Hawkins, a chiropractor at Bluffs, was recently arrested for practicing without a license. He pleaded guilty and was fined $35 and costs.

Personal.—The honorary degree of Doctor of Science was conferred on Dr. Henry Baldwin Ward, professor of zoology at the University of Illinois, by the University of Cincinnati on the occasion of the centennial anniversary of its medical college.

Chicago

New Hospital Wing Opened.—The increase in cases at the Cook County Hospital has impelled the opening of the new wing of the Muncipial Contagious Diseases Hospital.

Personal.—In connection with the centennial celebration of the founding of the Medical College of the University of Cincinnati, the honorary degree of Doctor of Laws was conferred on Dr. Ludvig Hektoen, and the degree of Doctor of Science on Drs. Dean D. Lewis and Edward Oakes Jordan. ——Dr. Henry W. Howe, who has been pursuing a special course at the General Hospital of Vienna for the last six months, is continuing his studies in Paris.

INDIANA

Greencastle Will Have County Hospital.—Putnam County citizens at the elections held November 2 voted to erect a hospital at Greencastle, at a cost of $95,000. The project had failed at a previous election.

Ford Hospital Changes Hands.—The Ford Hospital at Union City has been purchased by Dr. Robert W. Ried and after a general overhauling has been reopened for the reception of patients. Hereafter medical cases will be received as well as surgical.

IOWA

Sanatorium Dedicated — The Rohrbacher Sanitarium, founded at Iowa City by Dr. William M. Rohrbacher, was dedicated, October 19.

Northwest Society Holds Meeting.—At the semiannual meeting of the Northwest Iowa Medical Society, held at Sheldon, October 28, Dr. Herman Brackney, Sheldon, was elected president, and Dr. Jay Crawley, Rock Rapids, was reelected secretary and treasurer for the ensuing year.

KENTUCKY

Liquor Permits Revoked.—It is reported that the permits to prescribe liquor have been revoked by the state prohibition director, James H. Combs, from the following physicians: Drs. Oliver M. Reynolds, John Malcomb Beck, Griffith Carter Brannon, Arthur M. Robertson, Walter Scott Adams, Henry B. Beck, George H. Reid, Charles L. Cawein, Samuel C. Clowney, J. A. C. Lattimore and George M. Shaunty, all of Louisville.

Hospital Increases Capacity.—Construction work on the Murray Surgical Hospital of Murray whereby the capacity of the hospital will be increased from twenty-five to 100 beds is nearing completion. The institution will be a general hospital, instead of surgical as heretofore, and its name will probably be changed to the William Mason Memorial Hospital, in memory of the grandfather and father of the present chief of staff, Dr. William Herbert Mason, Jr.

MAINE

State Health Department Seeks New Building.—The urgent need for larger and more suitable quarters for the Maine State Department of Health has impelled Dr. Leverette D. Bristol, state health commissioner, to request an appropriation for the erection of a health building in the immediate vicinity of the state house, Augusta. The present offices of the health department are in a congested condition, endangering the safety of the vital statistics records and other valuable documents.

Waldo County Society Holds Meeting.—The Waldo County Medical Association held its annual meeting at Belfast, October 28, under the presidency of Dr. Eugene L. Stevens, Belfast. A banquet was served at the Windsor Hotel, at which officers of the Maine Medical Assocation and promimen physicians from Waterville, Skowhegan, Bangor and other cities were guests. The following were elected officers for the ensuing year: president, Dr. Elmer Small, Belfast; vice president, Dr. Sumner C. Pattee, Searsport, and secretary-treasurer, Dr. Carl H. Stevens, Belfast.

MARYLAND

Tuberculosis Lecture at Hygiene School.—Dr. Donald B. Armstrong, executive officer of the Framingham Community Health and Tuberculosis Demonstration, delivered a lecture at the Johns Hopkins University School of Hygiene and Public Health, November 9, on the methods of control and prevention of tuberculosis adopted at Framingham.

Personal.—Dr. Albert Peyron, director of cancer research work at the University of Marseilles and member of the Pasteur Institute, Paris, expects to come to Baltimore in January to study methods of treatment of cancer in local hospitals.——Dr. Valeria Parker, chairman of the National Committee on Social Hygiene of the League of Women Voters and assistant educational director of the American Social Hygiene Association, on her recent visit to Baltimore, addressed the Just Government League in support of the new country home for the Maryland Industrial Training School for Girls. As a result of her appeal, a resolution was immediately sent to Governor Ritchie, urging that the school be given its full appropriation. Dr. Parker also made addresses before the Maryland Branch of the Mothers' Congress and the Baltimore Child Welfare Circle.——Dr. Martin F. Sloan, superintendent of Eudowood Sanatorium, has left for an inspection of tuberculosis sanatoriums operated by the U. S. Public Health Service. He will be accompanied by Dr. Victor Cullen, superintendent of the State Sanatorium, and Dr. David R. Lyman of the Gaylord Sanatorium, Wallingford, Conn. They will visit sanatoriums at Greenville, S. C., Oteen and Biltmore, N. C., New Haven, Conn., and Markleton, Pa. During the absence of Dr. Sloan, Dr. William A. Bridges will be acting superintendent of Eudowood Sanatorium.

MASSACHUSETTS

Personal.—Dr. Frederick W. Johnson, Boston, has been appointed professor of clinical gynecology, and Dr. Louis E. Phaneuf, Boston, associate professor of gynecology at Tufts Medical School.——Dr. Robert N. Nye, Brookline, has been appointed research assistant in the pathologic department of the Boston City Hospital.

Cutter Lectures.—The Cutter Lecture on preventive medicine and hygiene will be delivered by Prof. Jules Bordet, director of the Pasteur Institute of Brussels, at the Harvard Medical School Amphitheater, November 15, on the subject of anaphylaxis. The lectures are given annually under the terms of a bequest of John Clarence Cutter, and are free to the medical profession and the press.

MICHIGAN

Tuberculosis Among Indians.—A recent survey among the Indians of the upper peninsula revealed the fact that 63 per cent. are either positive or suspected sufferers from tuberculosis. In view of these conditions the belief is entertained that the Indians will shortly be exterminated unless strenuous efforts are made to counteract the effects of the low standard of living.

Extension Clinics for Physicians.—The University of Michigan has organized extension clinics open to all practicing physicians. These clinics will be held on the second Wednesday of each month by members of the staff of the University Hospital, Ann Arbor, including Dr. Christopher G. Parnall, director of the University Hospital, Drs. Reuben Peterson, Hugh Cabot, Louis H. Newburgh and James G. Van Zwalenberg.

MINNESOTA

Tuberculosis Clinic Moved.—The monthly clinic heretofore conducted by Dr. Woolgate at the Aitkin-Crow-Wing Sanatorium in Deerwood will hereafter be held in the office of the county nurse in the Washington Block, Aitkin, on the third Saturday of each month.

Health Offices Combined.—In the process of reorganization, the division of hygiene in the board of education of Minneapolis has been placed into closer cooperation with the division of public health of the board of public welfare. These two functions of municipal government will be placed under one management, and the commissioner of health will also fill the position of director of hygiene.

MISSOURI

Lecture on Medicine in Korea.—At the regular meeting of the Jackson County Medical Society held at the Kansas City Medical Library, November 16, Dr. Oliver R. Avison, president of Severance Union Medical College of Seoul, Korea, delivered an illustrated lecture on "Medical Conditions in Korea."

County Society Offers Prize.—The Jackson County Medical Society announces a prize of $100 to the member presenting the best original paper before the society during the year from September, 1920, to June, 1921. Only members in practice ten years or less are eligible for the competition. The editorial staff of the society *Bulletin* will select the three most meritorious papers, and the final choice among these will be made by Dr. Edward J. Goodwin, editor of the *Journal of the Missouri State Medical Association.* It is understood the paper will be published in the state journal.

MONTANA

Public Health Hospital to Open Soon.—It is reported from Washington that the Public Health Hospital to replace Fort Harrison, near Butte, for the care of disabled veterans of the World War will be ready for occupancy, December 1.

Poliomyelitis in Ravalli County.—Six cases of infantile paralysis have been reported in Ravalli County since September, and four additional cases were recorded within a week recently. Only one of these proved fatal. The state board of health has notified physicians in Missoula and Ravalli counties to watch for early symptoms and to make prompt report of any suspected cases.

NEBRASKA

State Adding to Hospital.—The state is building an addition to its hospital for the feebleminded at Beatrice.

Personal.—Dr. Joseph M. Aikin, Omaha, underwent an abdominal operation, November 10, at the Methodist Hospital. Dr. Aikin is reported to be faring very satisfactorily.

NEW HAMPSHIRE

Public Clinic at Portsmouth.—A public health clinic has been organized at Portsmouth under the charge of Dr. George A. Tredick, physician of the board of health. Two sessions will be held weekly, on Tuesday and Friday evenings.

Child Welfare Clinic at Manchester.—A child welfare clinic has been established by the district nursing association at the fire station, on Somerville Street, Manchester. Dr. Benjamin Burpee is physician in charge of the clinic, which will be conducted every Wednesday and Saturday, at 9 a. m.

NEW YORK

Hospital Superintendent Resigns.—Dr. Harold Goodwin has resigned after thirteen years of service as superintendent of the Albany Hospital. William D. Rockefeller has been appointed to succeed him.

County Tuberculosis Sanatorium Opened.—The Broome County Tuberculosis Sanatorium at Binghamton was formally opened for the use of patients, October 20. Dr. Blinn A. Buell is superintendent of the sanatorium.

County Health Secretary.—Mrs. A. D. Roberts has been appointed health secretary of Livingston County. The work of this new office will be the coordination and development of all forms of health work, under the supervision of a committee consisting of the chairman of the public health committee of the board of supervisors, the chairman of the Livingston County Tuberculosis Association, and the district sanitary supervisor of the state department of health.

New York City

Harvey Lecture.—The third Harvey Lecture will be delivered by Dr. Nellis B. Foster of the Cornell Medical College at the New York Academy of Medicine, November 20. The subject of the lecture will be "Uremia."

Port Health Officer Lectures to Engineers.—Dr. Leland Cofer, health officer of the port of New York, delivered a lecture to the municipal engineers, at the Engineers' Building, October 27, on the subject of "Safeguarding Health at the Port of New York." He dealt with the activities of the Quarantine Station and the cooperative work of the New York City Department of Health.

Physician Sues for Whisky Blanks.—An equity injunction suit against Charles R. O'Connor, federal prohibition director for the state of New York, has been filed in the United States District Court by an attorney representing Dr. Melville A. Hays, alleging that when a book containing 100 blanks for prescribing whisky had been used the physician was refused a new one. He charges that his permit has not been revoked and therefore he is entitled to a new book, and asks for a mandatory injunction requiring the director to furnish a book.

Fifth Avenue Hospital Fund.—Contributions to the fund to construct the new Fifth Avenue Hospital amount to nearly $2,000,000. Among the contributors are Miss Ethel Barrymore (Mrs. Russell G. Colt) and Lionel and John Barrymore,

who gave $30,000 to endow a room in the new hospital in the name of the Barrymores for the benefit of stage performers. The new structure will be built in the shape of an "X," with all the 325 rooms outside rooms; the old ward system will be eliminated. No nurse of less than two years' experience will be permitted to attend a patient at the bedside. The hospital is already under construction and it will probably be ready for occupancy by July, 1921. Dr. Wiley E. Woodbury will be the director.

NORTH CAROLINA

Durham Child Welfare Clinic.—A child welfare clinic has been established in the Edgemont Baptist Church at Durham. A clinic will be held each Friday afternoon at 2:30 o'clock.

Free Tuberculosis Clinics.—In order to provide additional opportunity for free examination for tuberculosis the state board of health, American Red Cross and the North Carolina Tuberculosis Association have cooperated in the establishment of diagnostic clinics at points throughout the state. Hereafter where six or more persons desire an examination, a special clinic will be held. Dr. Joseph L. Spruill has been named the clinic physician under the auspices of the North Carolina Tuberculosis Association. Towns and counties desiring to hold clinics may secure appointment by applying to the North Carolina Sanatorium, Sanatorium.

OHIO

Dayton Mental Hygiene Clinic.—A weekly mental hygiene clinic will be conducted every Friday at 10 a. m., at the office of the Montgomery County Humane Society, Dayton, by Dr. Earl A. Baker, superintendent of the Dayton State Hospital.

Typhoid Epidemic at Salem.—Sewage which seeped into the tile pipe of the municipal water system at Salem caused the outbreak of more than 6,000 cases of enteritis and eighty-two cases of typhoid fever among the population of 11,000.

Medical College Centenary.—The centennial celebration of the foundation of the Medical College of the University of Cincinnati held, November 6, was the occasion for elaborate exercises which were attended by many leaders in the medical and educational world. Sir Auckland Geddes, British Ambassador, Hon. John Barton Payne, secretary of the interior, Dr. James R. Angell, president of the Carnegie Corporation, and Dr. Charles R. Stockard, Cornell University, delivered formal addresses at the banquet given at Hotel Sinton. Honorary degrees were conferred on twenty physicians and scientists including Drs. Joseph Ransohoff and Louis Schwab of Cincinnati. A life-size portrait of Dr. Christian R. Holmes, former dean of the college, was unveiled in the Holmes Memorial Library in the course of the anniversary exercises. Coincidentally appeared the first number of the new periodical, *University of Cincinnati Medical Bulletin*, published under an endowment initiated by Dr. Christian R. Holmes. It contains articles dealing with the history of medical education, hospitals, nursing, medical societies, and epidemics of Cincinnati, and incidents in the life of Dr. Holmes.

OKLAHOMA

Personal.—Dr. James Means, Claremore, has been appointed superintendent of health of Rogers County to succeed Dr. John C. Taylor, Chelsea, resigned.

Hospital Construction Plans.—A campaign to raise $100,000 for the construction of a hospital is being conducted at Hugo. ——The American Legion will apply to the state legislature for an appropriation of $1,000,000 for the erection of a hospital for disabled war veterans at Oklahoma City.——It is reported that the Methodist Episcopal Church, South, will erect a hospital at Oklahoma City from proceeds of the centenary fund.

OREGON

State Mental Defect Survey.—Returns of the survey of mental defects, delinquency and dependency in the state of Oregon which was conducted by Dr. Chester L. Carlisle, U. S. P. H. S., under the auspices of the extension division of the University of Oregon, show that these abnormal types are confined to less than 5 per cent. of the population of the state. The state survey was authorized by the legislature in February, 1919, and the task was assigned to the university without any appropriation to cover the costs. Success of the undertaking was due to special voluntary assistance of over 10,000 citizens.

PENNSYLVANIA

Personal.—Dr. Walter F. Donaldson, Pittsburgh, secretary of the Medical Society of the State of Pennsylvania, recently sustained painful injuries to the muscles of his back.

Sickness Census Planned.—A sickness census of Williamsport, conducted under the auspices of the state department of health and the Lycoming County Tuberculosis Society, will be completed November 20. This will be followed by a medical examination week to be held November 24-30.

Pittsburgh University Names New Chancellor.—It is reported that Mr. John G. Bowman, formerly for three years president of the State University of Iowa and since 1914 director of the American College of Surgeons, has been elected chancellor of the University of Pittsburgh, to succeed Dr. Samuel Black McCormick who has resigned because of ill health.

Harriman Hospital Inquiry.—Burgess C. L. Anderson has been authorized to appoint a committee of five representative citizens of the community to consult with the physicians, and to map out a comprehensive report on the condition of the Harriman Hospital at Bristol. The institution was established by the Emergency Fleet Corporation and was recently taken over under a lease for a year with an option of purchase.

Philadelphia

New Clinic Opened.—A neurologic clinic will be opened at city hall for members of the bureau of police. Dr. Hubley R. Owen, chief police surgeon, will be in charge and will be assisted by Dr. Michael A. Burns of Jefferson Hospital medical staff.

Health Insurance Conference.—The state health commission will meet, December 3, in Philadelphia for a series of addresses and discussions on the medical aspects of health insurance. The commission will meet in Harrisburg later in December to prepare its report to the next legislature after holding a series of hearings and meetings.

Personal.—Prof. Raymond Pearl of Johns Hopkins University delivered the annual Gross lecture of the Pathological Society on "Some Biological Aspects of Human Mortality."——Dr. Proctor C. Waldo has been appointed second assistant resident physician, Bureau of Hospitals.——Dr. Robert Grier LeConte has received the Navy Distinguished Service Medal in recognition of his services in the World War.

TEXAS

Plague Measures Resumed.—The finding of one plague infected rat in the business section of Port Arthur and two about 6 miles from Beaumont has caused the resumption of plague prevention activities of the U. S. Public Health Service in Jackson County.

Joint Hospital Endorsed by Medical Association.—The Dallas County Medical Association has endorsed the proposition for a bond issue of $225,000 to be floated by the city of Dallas in conjunction with an issue of a similar amount by the county for the erection of a joint county and city hospital.

Popular Health Chautauqua.—The Texas health chautauqua, an educational lecture campaign under the auspices of the Medical Evangelistic Chautauqua Company, opened its lecture series at the city hall auditorium, Dallas, October 31. Lectures are to be held weekly on Sundays, Mondays and Wednesdays and will be continued until February 1.

VIRGINIA

Norfolk County Health Board Reorganized.—Dr. Thomas A. Mann, Durham, N. C., has been appointed health officer of Norfolk County. The board of health has been reconstituted by the appointment of Drs. Archibald M. Burfoot, Fentress, Albert G. Horton, Ocean View, and Josiah Leake, Churchland.

State Medical Society Meeting.—At the fifty-first annual session of the Medical Society of Virginia, held at Petersburg under the presidency of Dr. Fletcher J. Wright, Petersburg, the following officers were elected for the ensuing year: president, Dr. Alfred L. Gray, Richmond; vice presidents, Drs. Edwin C. S. Taliaferro, Norfolk, Fletcher J. Wright, Petersburg, and Hunter H. McGuire, Winchester; secretary, Mr. G. H. Winfrey, Richmond (reelected), and treasurer, Dr. Hampden A. Burke, Petersburg. Lynchburg was selected as the place of meeting for the 1921 session.

WASHINGTON

New Health Officer in Cowlitz County.—Dr. Frank Davis, Kelso, has been appointed health officer of Cowlitz County succeeding Dr. Osmar K. Wolf, resigned.

Spokane Health Center.—A health center has been established by the Red Cross chapter of Spokane with headquarters at 706 Mohawk Building. The center will be open daily except Sunday from 9 a. m. to 5 p. m., and child welfare clinics will be conducted on Wednesdays and Fridays from 2 to 3 p. m. Health centers will also be established in Colville, Chewelah and Republic.

CANADA

Canada Medical Association News.—The fifty-second annual meeting of the Canadian Medical Association will be held in Halifax, N. S., July 5-8, 1921, under the presidency of Dr. Murdoch Chisholm. The new constitution and by-laws adopted at the last meeting provide for branch associations (the provincial societies), for affiliated societies (any federal medical or scientific body), for a council of fifteen members elected from the general membership, of delegates from the provincial branch associations, of representatives from the affiliated bodies, of two members elected by the council, the president, vice president, secretary and treasurer ex officio.

GENERAL

Rockefeller Foundation Physician Honored.—Dr. Bernard L. Wyatt of the American Commission for the Prevention of Tuberculosis in France, has been made a knight of the Legion of Honor of the French republic in recognition of his services in organizing the French campaign against tuberculosis.

Tuberculosis Association Offers Prize Cup.—The National Tuberculosis Association will award an intercity cup to the city enrolling the largest number of knight banners in the modern health crusade in ratio to the school enrolment for 1921. Another silver cup known as the interstate cup is awarded to the state having the largest number of crusaders. This was recently won by Iowa.

Association for Research in Nervous and Mental Disease.—The first session of the Association for Research in Nervous and Mental Diseases will be held in the New York Academy of Medicine, December 28 and 29. Following the presidential address of Dr. Walter Timme will come a complete discussion of the subject of "lethargic encephalitis" covering every phase of investigation of this disease. For information regarding membership or other matters, address Dr. Foster Kennedy, 20 West Fiftieth Street, New York.

Mississippi Valley Association Elects Officers.—At the annual meeting of the Mississippi Valley Medical Association recently held in Chicago, the following were elected officers for the ensuing year: president, Dr. Chauncey W. Dowden, Louisville; vice presidents, Drs. Ellsworth Smith, St. Louis, and John Rawson Pennington, Chicago; secretary, Dr. Henry E. Tuley, Louisville (reelected), and treasurer, Dr. Samuel C. Stanton, Chicago (reelected). St. Louis was chosen as the place of meeting for the next year.

Scholarships in French Universities.—Twenty-five fellowships for Americans who wish to secure advanced study in the various educational fields, including medicine, have been established in French universities. These are known as the American Field Service Fellowships and each will provide $200 in the first year and 10,000 francs each subsequent year. It is intended eventually to establish 127 such fellowships in honor of the 127 men of the Field Service in France who lost their lives in active duty during the World War. Applicants must be citizens of the United States, between 20 and 30 years of age; and (*a*) graduates of a college requiring four years of study based on 14 units of high school work, or (*b*) graduates of a professional school requiring three or more years of study for a degree; or (*c*) 24 years of age, with five years' experience in an industrial establishment in work requiring technical skill. Full information may be obtained from the secretary, Dr. Isaac L. Kandel, 522 Fifth Avenue, New York.

LATIN AMERICA

Smallpox in Haiti.—A recent cablegram from Haiti states that there is a smallpox epidemic on that island. In the city of Port-au-Prince, with 100,000 population, there are 400 cases. Thirty-five patients are being sent to the hospital daily. So far there have been no deaths, but the disease is gradually assuming a severe character.

Hospitalization of Venereal Patients.—The Department of the Interior of Chile has ordered that the Board of Public Charities proceed to carry out as soon as possible the provisions of a law adopted in 1918, ordering that prostitutes should be treated in hospitals until completely cured of venereal disease. In this connection the board has sent out questionnaires to the various hospitals inquiring whether they are observing the law, how many beds are reserved for prostitutes, the results obtained, and in case these measures are not being carried out whether special funds would be necessary to do so.

Death Rate Increase Among Colored People of Cuba.—In the last bulletin published by the Department of Sanitation of Cuba, Dr. George Le-Roy, chief of vital statistics, calls attention to the apparent increase in the death rate of the colored race, as shown by the vital statistics of the year 1916, just compiled. During that year the number of deaths among colored people exceeded by 2,713 the number of births; while among white people the number of births was 17,855 more than the deaths. According to the census bureau the population of Cuba in the year 1916 was 2,627,610, showing a gain of 108,580 in a year.

FOREIGN

Physician Appointed Minister of Public Health.—A Vienna exchange states that Dr. Prochazka of Prague, author of numerous works on hygiene, has been appointed minister of public health and physical training in the new government of Hungary.

Congress of Comparative Pathology.—The first international congress for comparative pathology was held at Paris in 1912, and Rome was selected for the place of the next meeting. After the intermission of the war, it is now announced that the second congress will meet in Rome next year. The leading Italian pathologists and internists form the committee of organization, with Professor Perroncito as president. A long series of topics have been appointed for discussion, including foot-and-mouth disease, cancer, regeneration of nerves, and the cycle of evolution of various parasites, etc. The secretary is Prof. M. Levi della Vida, Palermo, 58, Rome.

International Antiprostitution Conference.—At the conference held at Geneva, in September, of the Fédération Abolitioniste internationale, there were numerous representatives present from nearly all the European countries, and also from the United States and from Uruguay. The first meeting was opened by Yve Guyot of Paris who in 1876 was imprisoned for six months on account of his attacks on the government for its laxity. A delegate from the Netherlands presided at the second meeting. Nearly all the reports presented emphasized the vital necessity of combating syphilis. The conference voted that every form of compulsory management of venereal disease or regulation of prostitution must be done away with completely. The next conference is to be held at Rome in 1922.

Prizes for Neurologists.—Our German exchanges state that at the recent meeting of the German Neurologic Society the triennial Erb prize was awarded to M. Nonne of Hamburg and O. Foerster of Breslau for the best scientific practical work of the past six years in neurology. The Möbius prize was conferred on O. and Cecile Vogt of Berlin for their work on the anatomy of the brain, and on Nonne and Foerster for their works on syphilis, on the nervous system, on the estimation and treatment of war neuroses and on the diagnosis and surgical treatment of organic nerve diseases. As no prize was awarded during the war, there were thus two to be conferred from each foundation. Dr. Nonne was an invited guest of the American Medical Association at the annual session in 1909, and Professor Foerster in 1914.

CORRECTION

Fees at Ancon Hospital.—In an article by Dr. W. J. Mayo concerning Panama, THE JOURNAL, July 31, he said:

> Pay patients are admitted. The surgeons' fees go into the general fund of the hospital. Seven and one-half dollars a day is charged for a private room, and $2 extra for private bath. Nurses are supplied for $5 a day on an eight-hour-day schedule. Thus room and adequate nursing costs $24.50 a day. The people of average means cannot, of course, procure such attention, but they have access to the wards at $3.50 a day.

Col. L. T. Hess, superintendent of the Ancon Hospital, writes to point out that the maximum private room charges are $7.50 per day, including adequate nursing and all charges except roentgenology and operative work. Special arrangements may be made, however, for special service at increased cost, such as was described by Dr. Mayo.

Government Services

Association President Receives Naval Award

Dr. William C. Braisted, Surgeon-General, U. S. Navy, and President of the American Medical Association, has been awarded the Navy Distinguished Service Medal for meritorious service during the World War.

Award of Medal of Honor

The Congressional medal of honor has been awarded to four officers and two enlisted men of the Medical Corps of the Navy in recognition of heroic conduct during the World War. Those to whom the medal has been presented are Lieut.-Com. Alexander G. Lyle, Lieutenants Edouard V. M. Isaacs, Orlando H. Petty, and Ralph Talbot, the latter deceased, Pharmacist's Mate John Henry Balch and Hospital Attendant David Ephraim Martin.

Neuropsychiatry Section for the District of Pennsylvania and Delaware

The Public Health Service has ordered a board consisting of Dr. A. J. Ostenheimer of Philadelphia, Dr. T. Diller of Pittsburgh and the officer in charge of the Marine Hospital to convene in Pittsburgh and to arrange for the setting aside in the hospital of a section for the diagnosis of neuropsychiatric cases from the third district, comprising the states of Pennsylvania and Delaware.

Public Dispensary for Government Employees

A dispensary for government employees has been opened in Washington, D. C., by the U. S. Public Health Service, and Surgeon S. H. Christian has been placed in charge. Free medical attention will be given to all persons injured in line of duty in any of the government departments, to civilian employees of the Army and Navy, members of the police and fire departments of the District of Columbia, the coast guard, the Mississippi river commission and similar government commissions, War Risk Insurance bureau and men under training by the Federal Board of Vocational Training. This is the first effort to give medical assistance to all government employees or to furnish a dispensary where they could undergo treatment. The institution consists of an admitting office, eight examining offices, a surgical ward, an eye, ear, nose and throat ward, and departments of tuberculosis, physiotherapy, genito-urinary diseases, neuro-psychiatry, roentgen ray, pharmacy and orthopedics. The staff is composed of twenty-five physicians and six nurses and physiotherapy aids.

Progress of the Medical History of the War

At a meeting of the editorial board for the preparation of the history of the medical department in the World War, held at the Army Medical School, November 13, matters pertaining to the preliminary arrangements such as the lists of authors and subjects for the various volumes, the number of pages in each volume, the page size and style of composition were discussed in detail. It is expected that six volumes will be published this year, and as many more as the $50,000 appropriation will permit. These volumes will be: (1) Administrative Volume, Surgeon-General's Office; (2) Administrative Volume, American Expeditionary Force; (3) Tactical Volume, American Expeditionary Force; (4) Special Surgery; (5) Reconstruction, and (6) Neuropsychiatry. The administrative volumes are being prepared in the office of the editor-in-chief; the volume on special surgery is to be edited by Gen. J. M. T. Finney and Lieut.-Col. Roger Brooke; on Reconstruction by Col. Frank Billings and Major A. G. Crane, and on Neuropsychiatry by Col. Pearce Bailey and Col. Thomas W. Salmon. The officers of the editorial board in attendance at the meeting included Drs. George H. Brewer, Thomas W. Salmon and Hans Zinsser of New York; Dr. George E. de Schweinitz of Philadelphia; Drs. John M. T. Finney, William H. Welch and Thomas R. Boggs of Baltimore; Drs. Haven Emerson and James McKernan of New York; Brig.-Gen. Walter D. McCaw, Brig.-Gen. Jefferson R. Kean, Col. Charles Lynch, Lieut.-Col. Fielding H. Garrison, and Lieut.-Col. Joseph F. Siler, M. C., U. S. Army.

Foreign Letters

PARIS

(From Our Regular Correspondent)

Oct. 22, 1920.

International Tuberculosis Society

The inaugural session of the international conference on tuberculosis was held, October 17, in the amphitheater of the Sorbonne, under the presidency of M. J.-L. Breton, minister of hygiene and social welfare. By his side were seated M. Léon Bourgeois, the president of the French senate and of the national committee against tuberculosis; the ambassadors of participating nations; Dr. Laveran, president of the Académie de médecine; Drs. Emile Roux, L. Martin and A. Calmette of the Pasteur Institute, and the delegates from foreign countries. In his inaugural address, M. Breton referred in glowing terms to the results already obtained by the Comité national, and he expressed gratitude to the Rockefeller Foundation for the assistance that it has rendered to the French antituberculosis organization.

The delegates of the different nations adhering to the program of the international conference elaborated the statutes for the organization of an international society. This society will have for its objects (1) the establishment of a federative bond between the various national institutions and campaigns and the coordination of the efforts of all antituberculosis societies; (2) the comparative study of the laws and regulations pertaining to tuberculosis and related problems of social hygienie; (3) the establishment of an international statistical bureau; (4) the initiation of a survey of the prevalence and transmission of tuberculosis by countries and races, and (5) the collection and publication of all possible information on matters relating to the campaign against tuberculosis. The headquarters of the society will be maintained in Geneva, and a meeting will be held annually in one of the capitals of affiliated countries. The membership will be divided into councilor members, to be named by the national antituberculosis organizations; titular members, to be elected by the council after nomination by the governments or national organizations of adherent countries, and honorary members, to be elected by the general assembly after nomination by the council.

Meeting of the Physicians and Surgeons of the Civil Hospitals of France

The first Congrès professionnel des médecins et chirurgiens des hôpitaux civils de France, held at the Paris medical faculty, October 4-6, was attended by a large number of members of hospital staffs. The main object of the meeting was to repress the abuse of hospital facilities, against which vigorous but ineffectual protests have been made for a long time. With this in mind, the congress expressed its opinion that the public hospital is intended for indigent patients for attendance on whom the physicians and surgeons are entitled to compensation commensurate with the services rendered and the exigencies of modern life. Patients in modest circumstances who cannot afford to pay the regular fees of the private practitioner should be made to realize that the physician is entitled to a fee proportionate to their means. This perspective of legitimate compensation will tend to correct abuses by eliminating unnecessary visits. No other class of patients has a right to free treatment.

The Cultivation of Medicinal Plants

The war and the subsequent difficulties in international relations having directed attention to the subject of our native vegetable drugs, an interministerial committee on medicinal

plants was appointed under direction of M. E. Perrot of the Paris pharmaceutical faculty. Thanks to the liberality of a group of druggists, pharmaceutical societies and manufacturers and of interested individuals, the Office national des matières premières végétales pour la droguerie et la parfumerie was able to undertake a systematic survey, organize an active propaganda, and inspire attempts at the cultivation of plants. Regional committees have been appointed throughout the country for the purpose of directing and coordinating local efforts, and numerous pamphlets have been distributed. Although it is premature to draw definite conclusions after only fifteen months of activity, it is safe to say that the government's efforts have not been unproductive.

Even before the war the production of certain medicinal plants was far from negligible, and some special drug houses had taken measures to fill at least part of their needs from native sources. It goes without saying that one should not expect to raise medicinal plants wherever cereals and grasses give large yields; but there are large areas in France and the colonies where the latter products cannot be raised but which are nevertheless suitable for the cultivation of medicinal plants. Every effort is therefore being made to encourage the growing of vegetable products where conditions are unfavorable for the exploitation of more hardy plants. In some sections where certain plants are abundant, as on our mountain sides where immense areas are covered by lavender, the intensive cultivation of the indigenous plants ought to be introduced.

Protest Against Burial at Sea

The population of Saigon was greatly stirred some time ago on learning that the body of a young English woman who died aboard a steamer of the Messageries Maritimes was consigned to the sea despite the protests, entreaties and proffered compensation of her husband, who sought to have the body retained until the first port was reached. A petition was addressed to the governor of Cochin China, setting forth that burial at sea is a practice which originated in the period of sailing vessels when ships might remain becalmed for days, but that it is no longer justified now that voyages are much shorter and ocean travel has reached as great importance as traveling on land. By embalming the body or laying it in a coffin with suitable disinfectants, decomposition may be arrested for a longer time than is required for a trip from Saigon to Marseilles. Some German vessels are equipped with cold storage rooms for the preservation of cadavers. The petitioners requested that steps be taken to see that all passenger vessels in the future have aboard a number of coffins of wood and metal, or at least the material to construct them, and that the custom of consigning bodies to the sea be discontinued except in special cases during an epidemic.

LONDON

(From Our Regular Correspondent)

Oct. 23, 1920.

Intellectual Reconciliation with Germany

The letter sent to German professors by a number of professors and other officers of Oxford, with the object of dispelling the prevailing animosities, has aroused a good deal of protest from the university. It now appears that it represents only a minority, and that a large majority refused to sign it. The list of signatories contains less than sixty names. In the faculty of theology there are ten names and five signatories; in the faculty of law, eight names, and no signatories; in the faculty of medicine, twelve names and no signatory; in the faculty of literae humaniores, fifteen names and nine signatories; in the faculty of modern history, fourteen names and one signatory; in the faculty of medieval and modern languages, fifteen names and no signatory; in the faculty of natural science, thirty names and one signatory.

The Causation of Printers' Phthisis

The hypothesis of Mr. E. H. Ross that the silica and iron contained in printers' "list" is the cause of the prevalence of phthisis among printers is challenged in a letter to the *Times* by Prof. Leonard Hill the physiologist, one of the Medical Research Council appointed to inquire into industrial tuberculosis. He points out that silica and iron are found in almost any common dust, and he considers that silica dust is harmful only when inhaled for a long period and in concentrated doses, as by the workers in flint, ganister, granite and quartz. The evidence also goes to show that large amounts of silica dust can be inhaled with impunity when mixed with coal or other dust of "edible" nature. Coal dust stimulates the cells of the air passages to clean up the lungs by phagocytic action. Pure silica particles, on the other hand, seem to have no such stimulating action and, collecting in the lung tissue, excite there a fibroid change, which finally ends in tuberculous infection. Mr. Hill points out that tuberculosis attacks the operative printers' assistants more severely than the compositors, and they do not handle the boxes of type. The air of printing shops is not particularly dusty, and it seems improbable that the inhalation of silica dust in such shops has anything to do with tuberculosis. The users of public roads, paved with granite or flint, in dry weather inhale clouds of silica dust stirred up by motorcars, but the exposure of road sweepers to the dust does not appear to produce silicosis of the lungs. What is required is daily exposure in such dusty, enclosed spaces as those in which the gritstone worker, mason, or tin and gold worker are confined. Printers' work takes place in warm atmospheres, and in sunless, artificially lighted places—conditions which lower the metabolism and vitality of the body, and predispose to phthisis.

Medical Secrecy Not Recognized by the Admiralty

The British Medical Association has recently decided that "a physician should not without his patient's consent voluntarily disclose information which he has obtained from that patient in the exercise of his professional duties." An admiralty order, just published, forbids such secrecy to naval surgeons when giving evidence at courts martial or courts of inquiry. The order states that "a naval medical officer's first duty is to the service, and in any service inquiry he is bound to give all the information he can, however that information may have been acquired. He must therefore answer any question material to the inquiry unless, at his request, for special reason to be recorded in the minutes of the trial or inquiry, the officer presiding relieves him from the obligation to answer."

Irish Health Administration Stopped by Politics

A peculiar situation has arisen with regard to Irish health administration. The assassination of police and other political outrages render the local authorities liable to pay compensation to the relatives of the deceased or to persons whose property has been injured. But they refuse to do so. The government therefore pays the claims, but to recoup itself withholds from the local authorities grants for health administration which it had been making. The Irish Public Health Council has made representations to the government as to the dangers to the health of the community due to the withholding of the grants. The treatment of tuberculosis, child welfare and other important services are suspended in the affected districts.

The Ratten Inquiry

The case of Ratten, whose diploma, alleged to be obtained from the defunct Harvey Medical College of Chicago, has been questioned by the Medical Council of Tasmania, has

come before the chief justice of Tasmania. The chief justice delivered his reserved judgment on the application of the council that a commission should be appointed to take certain evidence in Chicago and Texas. The application has been refused, and an order in favor of Victor Richard Ratten for costs has been entered. The chief justice based his decision on a consideration of the question whether the jury would be able to determine the credibility or otherwise of witnesses from evidence taken elsewhere. He had to apply the principles of law. If the commission should be issued, the evidence would be taken and the jury would have the opportunity of seeing the demeanor of the witnesses and of observing the way in which the various questions put in cross-examination were answered. He had arrived at the opinion that the present case was one particularly unsuitable for trial in this way.

First Report of the Ministry of Health

The first report of the chief medical officer of the ministry of health has been issued. There are eight departments of this newly constituted ministry: on general health and epidemiology, maternity and child welfare, tuberculosis and venereal disease, supervision of food supplies, general practitioners' services, sanitary administration in relation to infectious diseases, Welsh Board of Health, and medical officers employed for special purposes. The staff of physicians amounts to ninety-five. British consular agents in all parts of the world have been instructed to send regular returns of infectious diseases and special reports when necessary. It is stated that there are 22,000,000 insured persons in the country with 12,000 physicians to attend them. A maximum number of 3,000 for a single-handed practice has been fixed. The chief medical officer, Sir George Newman, declares that the full value of the service will not be obtained until the physician, in addition to treating obvious disease, (1) recognizes its beginnings and treats it effectually in the early stages, and (2) becomes an exponent or missionary of personal hygiene in its preventive aspects. In regard to the dangers of typhus fever, it is declared that this may present great obstacles to the reestablishment of satisfactory peace conditions with Russia and other areas. The tendency of the Mecca pilgrimage to start epidemics of cholera which pass to Russia and thence to Europe is discussed.

BUENOS AIRES

(From Our Regular Correspondent)

Oct. 12, 1920.

Second National Medical Congress

The executive committee of the Second National Medical Congress has decided that the chief subject for discussion shall be hydatid cysts, which are rather frequent in this country. It is intended to ask all Argentine men of science to collaborate in order to study the problem from all standpoints in order that the transactions may present a complete review of our present knowledge of this disease.

Surgery Institute

The president has approved the law ordering the immediate construction of a surgical institute for the chair in charge of Professor José Arce. Four hundred thousand dollars has been provided for this work.

New Schools of Medicine

After a protracted strike, the School of Medicine of La Plata has been operating again for the last few months. Discipline is still far from perfect, and the students possess the absolute power to choose and dismiss professors. On account of the resignation of Dr. Belou, who was the organizer of the school, Dr. Greenway has become its dean.

The new school of medicine of El Rosario has been in operation this year, and its installation is nearly complete. Some of the professors for the second year courses have already been appointed; these courses will be started next year.

Scientific Lectures

An unusually large number of scientific lectures have been given either by medical professors of this city or by foreigners. Among the latter may be mentioned Professors Krause of Berlin; Leotta, Rome; J. Dumas, Paris; Infantozzi, Montevideo; Salcedo, Santiago de Chile, and Reenstierna, Stockholm. The Academy of Medicine of Buenos Aires has made Professor Dumas an honorary member. He gave a course on psychology in the school of philosophy and letters, and two lectures on mental and nervous disturbances during the war.

Practice of Medicine by Foreigners

In our country, foreigners cannot practice medicine unless they pass the full series of examinations required of Argentine students, which takes two or three years. Unless this is done, they can practice their profession only in isolated regions where there are no national physicians. An obvious case of illegal practice which has made a distinctly unfavorable impression is the behavior of some foreign physicians, often renowned professors, who come to this country under the pretense of giving lectures, but devote themselves to practicing their profession, charging large fees, all of this being accompanied by active newspaper propaganda. Little by little there is developing an attitude of resistance to this illegal practice of medicine, some of these physicians having even refused to operate free of charge in our hospitals.

Spermatozoa and Inheritance

Dr. Victor Widakowich's investigations on the morphology of the sperm of syphilitic patients have attracted much attention. His studies indicate that there is a considerable number of abnormal spermatozoa in the sperm of these patients. He states that this permits a more accurate diagnosis of this disease than any other known method. This spermatic taint persists in many patients treated and giving negative Wassermann tests. If these results are confirmed, they will assume enormous importance in the explanation of hereditary syphilitic dystrophies, and will endow spermatozoa with an all-important rôle so far as inheritance is concerned.

Dr. Decoud's Death

Dr. Diogenes Decoud, academician, who retired recently as professor of the School of Medicine of Buenos Aires, died in this city, October 2. Dr. Decoud was born in Paraguay, but he had been educated in Buenos Aires, and was a noted surgeon. His scientific accomplishments were considerable, and special mention should be made of his persistent campaigns on behalf of spinal anesthesia.

BELGIUM

(From Our Regular Correspondent)

Oct. 22, 1920.

Reeducation Schools

Before the war there were two Belgian schools of reeducation, and these served as models for the great institution of Port Villez (Eure) where the disabled Belgian soldiers will be gathered. Despite the German occupation, these schools continued to function regularly; and now that peace has been reestablished, some account should be taken of the great good which they accomplished. It might be hoped that the example set by the provinces of Hainaut and Brabant may be imitated far and wide.

The school for cripples at Charleroi opened in 1907 with thirty-one students; by 1910 the number had increased to 107.

Since then the attendance has steadily grown larger to a point at which the provincial authorities felt impelled to increase its facilities. It should be added, by the way, that it was recently decided to admit crippled soldiers, and special appropriations were voted for this purpose. The school admits congenital cripples as well as those who have been maimed in industry. In its workshops it offers a number of industrial courses, such as shoemaking, bookbinding, basket making, carpet weaving, harness making, tailoring and bookkeeping, not to mention the general courses contributing to the increase of general and technical knowledge. The workshops are open all day. The students receive their lunch free of charge, and are paid for their work, just as in a commercial factory.

The Brabant provincial institute for cripples was opened in 1914, five years after the detailed proposals for its establishment were presented to the provincial council. The medical and orthopedic dispensary was opened in March, 1914. The institution was closed immediately after the outbreak of the war, and did not reopen until May, 1915, and then only with considerable difficulty. At the beginning of 1920, the register of the Brabantine institute included 509 cripples, besides forty-seven under medical treatment, and thirty-nine students in attendance on the shoemaking, orthopedic, bookbinding and basket weaving workshops. Since the opening of the harness making and tailoring shops, the number of students has been greatly augmented. The industrial courses are almost identical with those given at Charleroi.

Changes in Medical Education

Heretofore, the medical course in Belgium embraced six or seven academic sessions, the first two of which were devoted to the physical and natural sciences; the third and fourth to anatomy and physiology, and the last three to pathology, hygiene and the clinical subjects. In the course of his last three years at school, the student was expected to attend the hospitals and the special clinics. Two years' attendance at the clinics was prescribed, but attendance was obligatory only at the medical, surgical, obstetric and ophthalmologic clinics. Through some whimsical oversight in the regulations, a student could get his final diploma without studying dermatology, urology, otorhinolaryngology or any of the other specialties. This is no longer the case, however, and henceforth a candidate for the medical degree will have to present evidence of a theoretical and practical knowledge of urology, dermatology, venereal diseases, otorhinolaryngology and gynecology.

Death of Nuel

Dr. J.-P. Nuel, member of the Académie royale de Belgique, and emeritus professor of ophthalmology of the Liége medical faculty, died a few days ago. Dr. Nuel was counted among the great physiologists of the age, and made notable contributions to the physiology of vision, his most important publication being a manual on the physiology of the special senses. He had relinquished his professorship some years ago into the hands of Professor Weekers.

The Flemish Medical Congress

The Flemish scientific congress, which met at Ghent a short time ago, brought together many of the outstanding scientists of Flanders. The congress embraced three principal sections: medicine, the natural sciences and engineering. At the same time the philologists and jurists held their meetings in other cities. For some reasons it would not be surprising at this time, when the linguistic quarrel is so acute in Belgium, if this congress might not have been an attempted demonstration to unite all of the Flemish factions. Many visitors from Holland took an active part in the proceedings of the congress.

Marriages

Herbert R. Coleman, Asst. Surg., Lieut. (j. g.), U. S. Navy, to Miss Odie Mary Powell, at San Francisco, October 29.

Percy Octave Chaudron, Dothan, Ala., to Miss Carrie Virginia Givens of Mobile, Ala., November 24.

Royall Graves Cannaday, New York, to Miss Ramelle Burgess Smith of Albemarle, N. C., November 6.

Michael Joseph Egan, Jr., Savannah, Ga., to Miss Elsie Frances Robider of Montreal, Que., October 2.

William Tecumseh Sherman Thorndike, Boston, to Miss Katherine Hunt of Auburn, N. Y., October 9.

Edwin Porter Buchanan, Pittsburgh, to Miss Marion Vesta Bayley of Lexington, Mass., October 16.

Damon Ambrose Crist, Phillipsburg, Ohio, to Miss Helen Mannassau of Chicago, recently.

Joseph Abner Abel, South Bend, Ind., to Miss Theresa O'Donnell of Chicago, recently.

John Francis Curtain, Minneapolis, to Miss Mae Sandt of Winona, Minn., October 15.

J. Alexander Lipnick to Miss Ruth A. Berlin, both of Norfolk, Va., October 7.

Frank H. Hagaman, Sardis, Miss., to Miss Edwina Short of St. Louis, October 31.

Maurice P. Seidner to Miss Bertha Reisman, both of Chicago, recently.

Samuel J. Ginsburg to Miss Yetta Weiss, both of Chicago, recently.

Deaths

John Randolph Ham, Brookfield, Mass.; Bowdoin Medical School, Brunswick and Portland, Maine, 1866; aged 78; a veteran of the Civil War, assistant surgeon of the One Hundred and Fifteenth New Hampshire Infantry; a member of the New Hampshire Medical Society; died, October 31.

Willard Nathan Bell ⊕ Ogdensburg, N. Y.; New York Homeopathic Medical College, New York, 1882; aged 63; a specialist in diseases of the eye and ear; for ten years a member of the board of education of Ogdensburg; died, October 25, from pneumonia.

William D. Carter, Nashville, Ill.; Rush Medical College, 1862; Chicago Medical College, 1866; aged 83; a member of the Illinois State Medical Society; assistant surgeon of the Forty-Fourth Volunteer Infantry during the Civil War; died, October 27, from pneumonia.

Albert Freeman Snell, Jr., Cincinnati; Eclectic Medical College, Cincinnati, 1914; aged 32, associate professor of histology and embryology in his alma mater; lieutenant, M. C., U. S. Army, and discharged Feb. 26, 1918; died, October 29.

Edward Gray, Berkeley, Calif.; College of Physicians and Surgeons in the City of New York, 1875; aged 70; for twelve years resident physician at the Sonoma State Home, Eldridge, Calif.; died suddenly, November 3, from heart disease.

Stephen William Hayes ⊕ New Bedford, Mass.; Harvard University Medical School, 1870; aged 72; visiting physician to St. Luke's Hospital; at one time president of the South Bristol Medical Society; died, November 2.

Richard Thomas Holland, Castleberry, Ala.; University of Alabama, Mobile, 1890; aged 55; a member of the Medical Association of the State of Alabama; died, September 21, from general paralysis.

Edmond D. Mills, Memphis, Mich.; Michigan College of Medicine and Surgery, Detroit, 1896; aged 51; died at the State Psychopathic Hospital, Ann Arbor, October 19, from hyperthyroidism.

Richard H. Lull, Evanston, Ill.; Rush Medical College, 1883; aged 60; assistant chief surgeon of the Chicago, Milwaukee and St. Paul Railroad; died, November 11, from angina pectoris.

William Russell Palmer ⊕ Johnsonburg, Pa.; University of Buffalo, 1887; aged 57; was instantly killed, November 3, when the automobile in which he was riding plunged over an embankment.

⊕ Indicates "Fellow" of the American Medical Association.

John Albon Crowther, Savannah, Ga.; University of Virginia, Charlottesville, 1895; aged 61; a member and at one time president of the Medical Association of Georgia; died, October 10.

Christian Oswald Joerg, Brooklyn; University of Leipzig, Germany, 1870; aged 76; a member of the Medical Society of the State of New York; died, November 4, from myocarditis.

Clement A. Smith, Little Rock, Ark.; Meharry Medical College, Nashville, 1902; aged 46; a colored practitioner; died suddenly, October 26, from heart disease.

William P. Noble, Greencastle, Pa.; Jefferson Medical College, 1869; aged 75; a member of the Medical Society of the State of Pennsylvania; died, October 28.

William J. Coleman, Mineral, Va.; Medical College of Virginia, Richmond, 1879; aged 64; a member of the Medical Society of Virginia; died, October 31.

Charles Beamen Ballard ✠ Pooleville, Okla.; Fort Worth (Texas) School of Medicine, 1905; aged 45; died suddenly, October 24, from cerebral hemorrhage.

Henry Winslow Boutwell ✠ Manchester, N. H.; Harvard University Medical School, 1882; aged 72; at one time state senator; died suddenly, November 3.

Logan Stanley, Roachdale, Ind.; Indiana Medical College, Indianapolis, 1876; aged 74; a veteran of the Civil War; died, November 1, from uremia.

Barnard Lecherzack Bernard, Boston; University of Kazan, Russia, 1883; aged 57; a member of the Massachusetts Medical Society; died, October 28.

Christopher Columbus Baker, Fitzpatrick, Ala.; University of Nashville, Tenn., 1859; aged 80; a veteran of the Civil War; died, October 19.

Charles C. Morris, Rockville, Ind.; Jefferson Medical College, 1876; aged 72; coroner of Parke County; died, October 28, from heart disease.

Walter S. Ferguson, Toronto; Trinity Medical College, Toronto, 1890; aged 57; died suddenly, October 17, from cerebral hemorrhage.

George Edwin White, Sandwich, Mass.; Hahnemann Medical College and Hospital of Philadelphia, 1880; aged 71; died, October 20.

Edward Louis Drowne, Boston; Harvard University Medical School, 1904; aged 42; died, October 24, from valvular heart disease.

Joseph A. White, Dumas, Ark.; University of Tennessee, Memphis, 1886; aged 61; died, October 9, from cerebral hemorrhage.

Karl Herman Schmidt ✠ Chicago; Northwestern University Medical School, 1911; aged 31; died, October 30, from pneumonia.

James Gerard Wiltshire, Baltimore; University of Maryland, Baltimore, 1869; aged 73; a Confederate veteran; died, October 28.

William John Gibson, Belleville, Ont.; Queen's University, Kingston, Ont., 1881; aged 72; died in Rochester, Minn., October 7.

William Joseph Fischer, Waterloo, Ont.; Western University, London, Ont., 1902; aged 41; died, August 15, from sarcoma.

Frank E. Brooks, Seattle; Bennett College of Eclectic Medicine and Surgery, Chicago, 1877; aged 70; died, October 21.

Gaetano De Marco, Somerville, N. J.; University of Naples, Italy, 1907; aged 38; died at Atena, Lucania, Italy, October 19.

Cornelia Bennett White Thomas ✠ Rochester, N. Y.; Syracuse (N. Y.) University, 1895; aged 50; died, October 22.

Samuel Ernest Kaestlen, Cleveland; Western Reserve University, Cleveland, 1890; aged 56; died, October 30.

James Truitt Stephens, Mansfield, Texas; Bellevue Hospital Medical College, 1873; aged 72; died, October 15.

Isaac W. Newcomet, Stouchsburg, Pa.; University of Pennsylvania, Philadelphia, 1867; aged 77; died, October 31.

Thomas Featherstonhaugh, Duanesburgh, N. Y.; Albany (N. Y.) Medical College, 1877; died, October 27.

Frank Thompson, Cambridge, Iowa; State University of Iowa, Iowa City, 1882; aged 62; died, October 22.

John Mundell, Kingston, Ont.; Queen's University, Kingston, Ont., 1886; died, October 15.

Robert B. Lamont, Moosic, Pa.; Jefferson Medical College, 1873; aged 72; died, October 24.

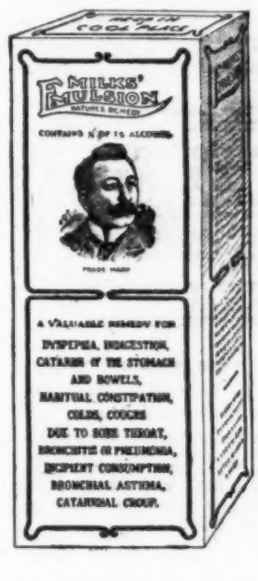
The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE FRAUD ON THE PUBLIC AND ON THE PROFESSION

MORE MISBRANDED NOSTRUMS

Stearns' Santolods.—Frederick Stearns & Co., Detroit, shipped in July, 1918, a quantity of this product which was misbranded. The "Santaloids" were gelatin capsules which, according to the government chemists, contained oil of santal. The preparation was sold for the treatment of gonorrhea and the claims made for it were declared false and fraudulent. In November, 1919, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 7667; issued Oct. 29, 1920.*]

Milks' Emulsion.—Between May and September, 1919, the Milks Emulsion Co., Terre Haute, Ind., consigned over 3,000 bottles of this nostrum which the government held was misbranded. Analysis showed the preparation to consist essentially of petrolatum, with small amounts of glycerin, syrup and methyl salicylate. Fats were absent. The contents of those bottles that were labeled as containing 29 ounces varied in amounts from 19.9 ounces to 21.3 ounces. The so-called 12 ounce bottles actually held from 8.15 ounces to 9.15 ounces. The stuff was falsely and fraudulently claimed to be of benefit in incipient consumption, bronchial asthma, pneumonia, etc., and was recommended as of value for strengthening and "building up" children. Judgment of condemnation and forfeiture was entered and after the company had paid the costs of the case and had executed a bond for $2,500 the product was released to it.—[*Notice of Judgment No. 7668; issued Oct. 29, 1920.*]



Bliss Native Herbs.—Alonzo O. Bliss, Washington, D. C., shipped, in August, 1919, eighty-four boxes of this nostrum. The government seized this material on the charge that it was misbranded in violation of the Food and Drugs Act. Analysis by the Bureau of Chemistry showed Bliss Native Herbs to consist essentially of licorice, aloes, buchu and red pepper. The product was so labeled as to create in the minds of the purchasers the belief that it was a remedy for "intestinal indigestion," "rheumatism," sciatica, lumbago, etc., and that it would "correct the blood, dissolving acids that accumulate in the system." These claims were declared false and fraudulent and applied knowingly and in reckless and wanton disregard of their truth or falsity. In March, 1920, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 7638; issued Oct. 22, 1920.*]

Madame Dean Antiseptic Vaginal Suppositories.—Martin Rudy, Lancaster, Pa., shipped in December, 1918, a number of boxes of this preparation which were misbranded. The suppositories, according to the federal chemists, consisted essentially of cacao butter, bismuth and aluminum salts, sulphate, boric and tannic acids and a small amount of unidentified plant material. The packages, which bore the name of the "United Medical Co.," of Lancaster, Pa., contained claims to the effect that the product would relieve vaginitis, vulvitis, gonorrhea, "and similar Female Complaints." These claims

were declared false and fraudulent and in October, 1919, judgment of condemnation was entered and the court ordered the product destroyed.—[*Notice of Judgment No. 7645; issued Oct. 22, 1920.*]

Halz Tablets.—The Ed. Price Chemical Co., Kansas City, Mo., shipped in April, 1918, a quantity of Halz Tablets which the government authorities held were misbranded. Analysis showed the tablets to consist essentially of carbonates of calcium and magnesium, resins and plant material, including cubebs, rhubarb and aromatics. The tablets were sold under the claim that they would cure gonorrhea, leucorrhea, "unnatural discharges," etc. The purchaser was urged to use "Halz Injection" in connection with the "tablets." The "injection" has also been declared misbranded. The claims made for the tablets were held to be false and fraudulent and in March, 1920, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 7663; issued Oct. 29, 1920.*]

D. D. D.—This nostrum comes in two forms, "Ordinary" and "Extra Strong." In January, 1913, the D. D. D. Co., Chicago, shipped a quantity of both strengths, both of which the government held were misbranded. When analyzed the "Ordinary" was found to be a water-alcohol solution of chloral hydrate, methyl salicylate, salicylic acid, thymol, phenol, glycerin and yellow coloring matter. There was 32 per cent. alcohol by volume. The "Extra Strong" was essentially the same except that it contained 35.1 per cent. alcohol.

The claims made for the "Ordinary" were such as to lead purchasers to believe that it was an invaluable remedy for psoriasis, dandruff, erysipelas, etc., "when in truth and fact the said article of drugs would not be an invaluable remedy . . . nor any remedy whatsoever" for these conditions. The "Extra Strong" was sold under claims that would lead the purchaser to believe that it was a cure for all cases of chronic dry eczema of the body, arms or legs when as a matter of fact it would not do what was claimed but might in some cases prove harmful. The D. D. D. Company in March, 1920, entered a plea of *nolo contendere* and was fined $50 and costs.—[*Notice of Judgment No. 7669; issued Oct. 29, 1920.*]

Correspondence

UNSUCCESSFUL TREATMENT OF STAPHYLOCOCCAL INFECTIONS WITH PREPARATIONS OF TIN

To the Editor:—I was much interested in your answer to a query about Stannoxyl (The Journal, March 6, p. 629). I submit the following experience as a confirmatory note:

While serving with the Royal Army Medical Corps in Egypt, I for some time had charge of the medical division of a hospital in which most of the skin diseases occurring among soldiers in the district were treated. The most common conditions were boils and septic sores, chiefly due to staphylococcal infection, though several of the latter cases were diphtheritic. The treatment adopted was that in ordinary use, namely, incision and evacuation of pus, application of antiseptic dressings, and in most cases employment of the specific vaccine. It was possible to judge of the efficacy of any variations of treatment, as there were always plenty of cases undergoing the usual treatment with which the results could be controlled.

An available supply of Stannoxyl, a proprietary remedy consisting of a mixture of metallic tin and tin oxid, enabled me to give it a fair trial in full doses in eight cases of boils of average severity, in which culture revealed the infecting organism to be *Staphylococcus aureus.* The boils were treated locally as usual, but no vaccine was given. No improvement could be demonstrated in these cases that could not be shown in other cases similarly treated with the omission of Stannoxyl; in fact, three of the treated cases were much longer in clearing up than the untreated controls. Eight cases do not constitute a very large series from which to draw conclusions; but, if the preparation were as good as the descriptive literature would lead one to believe, one should have expected an evident result in at least one of these cases.

It has been stated that Stannoxyl does not inhibit the growth of staphylococci, but only renders the growth less virulent. It is known that a certain amount of tin may be absorbed from the intestine, and Salant, Rieger and Treuhardt have shown that in certain cases tin may be retained for some time in the skin; but it is questionable whether, when preparations of tin are given by mouth, any reaches the staphylococci in the boils, or at any rate enough materially to influence their growth or virulence.

In the cases treated by me the results did not at all suggest that Stannoxyl was a "specific for diseases of staphylococcal origin."

J. W. C. Gunn, M.A., M.B., Ch.B., Cape Town.
Professor of Pharmacology, University of Cape Town.

ELECTION OF MORTON TO HALL OF FAME

To the Editor:—A few months ago I sent out a plea for recognition of the medical profession in the Hall of Fame, and especially for Morton as perhaps the most outstanding figure in American medicine. This was published in many of our leading medical periodicals, and as yours was one which extended the hospitality of its columns to the cause, I am sure The Journal of the American Medical Association has in no small degree helped in the election of Morton's name. The outcome of the recent election must be gratifying to every American physician who is familiar with Morton's life, his struggles for recognition, and the sad experience he was made to undergo by those who attacked him during life and those who up to this time wished to withhold the credit for his work.

Our never-to-be-forgotten Osler, with his keen sense of justice, gave us the result of his profound study of historical medicine concerning Morton's share in the discovery and promulgation of ether anesthesia in the words: "William T. G. Morton was a new Prometheus who gave a gift to the world as rich as that of fire, the greatest single gift ever made to suffering humanity." And Professor Welch confirms the investigation of his life-long friend, and in one of his recent letters to me says: "Surgical anesthesia has been America's greatest contribution to medicine and surgery, and it would be a thousand pities not to have this recognized in the Hall of Fame. As only one name can be selected for this purpose, it is clear to me that this name should be Morton." Professor Welch was one of the electors, and his influence was doubtless an important factor in Morton's final triumph.

It will interest the readers of The Journal to know the exact outcome of this year's election of America's immortals for the Hall of Fame. Of the 178 names voted on, seven were chosen: Samuel Langhorne Clemens (Mark Twain), who received 72 votes; James Buchanan Eads, the engineer,

51; Patrick Henry, statesman, 57; William Thomas Green Morton, discoverer of ether, 72; Augustus Saint-Gaudens, the sculptor, 67, and Roger Williams, the minister, a leader in liberal religion and founder of Providence, R. I., 66. The only woman who received enough votes to place her name on the roll was Alice Freeman Palmer, the educator, who received 53 votes.

That Morton, together with our most beloved Mark Twain, should have received more votes than any other candidate is a particularly good omen for the medical profession, and it is to be hoped that in future elections the names of our other great pathfinders in medicine and surgery may not be forgotten. Such names as Ephraim McDowell, J. Marion Sims, Benjamin Rush and Walter Reed all deserve a place among the immortals in America's Hall of Fame.

S. ADOLPHUS KNOPF, M.D., New York.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted on request.

THE TREATMENT OF SYCOSIS

To the Editor:—I have a case of sycosis vulgaris, nonparasitic, which seems to resist all forms of treatment. Can you or any of our readers suggest anything that might help my patient?

C. H. J. BARNETT, M.D., Philadelphia.

ANSWER.—Simple sycosis, as ringworm sycosis, is always very difficult of cure. The ordinary methods of treatment are epilation, antiseptic washes, such as mercuric chlorid solution, and antiseptic salves, such as ammoniated mercury ointment. The cure of a well established case of sycosis by such a method is difficult, and if successful requires unending persistence and patience. Sycosis can usually be cured quickly by using roentgen rays or radium to the point of causing epilation of the hairs in the affected bearded area. This is the only method that gives prompt results; but it must be used with caution so as not to overdo it. If so used, good results are obtained without damage to the skin.

"LEPSO"—EPILEPSY CURE

To the Editor:—Kindly tell me whether or not the preparation Lepso, prepared by the Lepso Company of Milwaukee, Wis., has been subjected to analysis and if so what it contains.

ERNEST COLE, M.D., Winchester, Ky.

ANSWER.—The Lepso humbug was dealt with in THE JOURNAL, June 12, 1915, and the matter has been reprinted in the pamphlet "Epilepsy Cures" (10 cents). Like most "epilepsy cures," Lepso was found by the Association's chemists to be essentially a bromid mixture. It was found to contain the equivalent of 51 grains of potassium bromid to the dose.

The Duct Sign in Mumps.—Attention has recently been drawn to the fact that in cases of mumps the orifice of Steno's duct becomes red and inflamed. This appearance was noticed in 96 per cent. of fifty-seven hospital cases. But to what extent this sign can be regarded as pathognomonic of the disease is still doubtful, for it may also be apparent in a certain number of normal individuals. Its value as a symptom would seem to be limited to confirming the diagnosis when specific parotitis is present. Observation, nevertheless, has shown that it develops and disappears under the influence of the disease, and that it appears early, sometimes before the enlargement of the gland has become manifest. The fact, however, that the symptoms of mumps are extremely typical, presenting but little difficulty in diagnosis, probably accounts for the failure hitherto to notice the changes in Steno's duct which are now held to be associated with the disease.—*Med. Press,* Oct. 20, 1920.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

DELAWARE: Dover, Dec. 14-16. Sec., Reg. Bd., Dr. P. S. Downs, Dover.

FLORIDA: Gainsville, Dec. 6-7. Sec. Reg. Board, Dr. W. M. Rowlett, 812 Citizens Bank Bldg., Tampa.

ILLINOIS: Chicago, Dec. 6-7. Director, Mr. Francis W. Shepardson, Capitol Bldg., Springfield.

LOUISIANA: New Orleans, Dec. 2-4. Sec., Dr. E. W. Mahler, 1551 Canal St., New Orleans.

MARYLAND: Baltimore, Dec. 14. Sec., J. McP. Scott, 137 W. Washington St., Hagerstown.

OHIO: Columbus, Dec. 1-3. Sec., H. M. Platter, State House, Columbus.

VIRGINIA: Richmond, Dec. 14-17. Sec., J. W. Preston, 511 McBain Bldg., Roanoke.

GRADUATE MEDICAL EDUCATION

Special Conference of the Council on Medical Education and Hospitals

A conference called by the Council on Medical Education and Hospitals was held at the University Club, Chicago, Thursday, Nov. 11, 1920, to discuss ways and means of providing minimum courses of graduate instruction in the various medical specialties. Thirty-three prominent medical educators and university representatives were present. In determining what the minimum course of graduate training in each specialty should be, it was decided that the work of each committee should be carried on largely by correspondence and that, after the ideas of all members have been obtained, a final report could be drafted either through correspondence or at a meeting of the committee.

In the discussion it was stated that of the 3,000 graduates each year about 10 per cent., or 300, would be required to meet the demand in all the specialties. It was believed that abundant facilities were available to train these men, although at present all these facilities were not well organized.

Two quite distinct needs were pointed out for each committee to consider; namely, the proper training for those preparing to practice the specialty, and the providing of short review courses for those already established in such practice. It was urged that the work be on the basis of genuine graduate instruction and that the student should be encouraged to do his work independently, so far as possible.

Rather than the establishing of definite courses of a prescribed minimum of hours, it was deemed important that the student should carry on continuous work for a period of months or years. The student should be encouraged by the instructor to work out clinical problems for himself; he should be given adequate assistance in acquiring skill in examinations and in the use of instruments; he should be drilled in the technic of operations, but, in particular, emphasis should be placed on recognizing the indications for operations.

Each committee was reminded that the standard of preparation desired was a minimum standard and not an impracticable ideal. Doubtless, many of the students would not be satisfied with the minimum but would voluntarily devote more time to special preparation. It was stated that the final reports of the committees would be presented at the annual conference of the Council, to be held in Chicago, March 7 and 8, 1921.

The attention of the conference was called by the Council to the minimum standard of training for otolaryngologists, reported recently by a special committee made up of representatives of the several American associations of specialists in otolaryngology.

Discussion was given also to the character of a certificate or degree to be granted to such physicians as should complete satisfactorily the course of training in any particular specialty. The conference was opposed to the multiplication of degrees, but voiced the opinion that the Master of Science (M.S.) degree might be granted with or without designating the medical specialty for which it was granted. It was

declared that the Doctor of Philosophy (Ph.D.) degree should be granted only to those physicians who have completed a prolonged course and have conducted some satisfactory research work.

Missouri June Examination

Dr. George H. Jones, secretary, Missouri State Board of Health, reports the written examination held at St. Louis, June 14-16, 1920. The examination covered 14 subjects, and included 100 questions. An average of 75 per cent. was required to pass. Of the 85 candidates examined, 84 passed and 1 failed. Twenty-five candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Louisville Medical Department		(1920)	86.4
Harvard University		(1920)	85.5
Johns Hopkins University		(1917)	84.2
Barnes Medical College, St. Louis		(1903)	79
St. Louis College of Physicians and Surgeons		(1908)	81.9
St. Louis University School of Medicine		(1920)	80.5, 80.1, 81.2, 82.5, 82.1, 82.1, 83, 83.1, 83.1, 83.1, 83.4, 83.9, 84.1, 84.1, 84.3, 84.4, 84.6, 84.8, 84.9, 85.1, 85.1, 85.6, 85.8, 86.1, 86.1, 87.2, 87.2, 87.3, 87.8, 87.8, 88, 88.1, 88.1, 88.2, 88.4, 88.5, 89.1, 89.5, 90.4, 90.9.
Washington University Medical School		(1917) 84.1, (1918) (1920) 77.9, 79.1, 81.1, 81.4, 82.1, 82.4, 82.6, 83.9, 83.9, 84.1, 84.1, 84.5, 84.9, 84.9, 85.1, 85.1, 85.8, 85.9, 86.1, 86.2, 86.2, 86.4, 86.7, 87.1, 87.5, 87.5.	84.1,
Jefferson Medical College of Philadelphia		(1920)	85.6, 87
University of Pennsylvania School of Medicine		(1920)	86.9
Meharry Medical College		(1920) 75.9, 77.1. 80, 80, 80.5,	81.1
University of West Tennessee Coll. of Med. and Surg.		(1915)	75.4
University of Texas Department of Medicine		(1919)	81.6
St. Louis College of Physicians and Surgeons	FAILED	(1918)	63.1

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Tulane University of Louisiana School of Medicine		(1919)	Louisiana
Bennett Medical College		(1908) (1915)	Illinois
Rush Medical College		(1916), (1917)	Illinois, (1917) Kansas
University of Illinois		(1911)	Illinois, (1915) Iowa
State University of Iowa Coll. of Homeopathic Med.		(1887)	Iowa
Kansas Medical College		(1897)	Texas, (1905) Colorado
Univ. of Kansas Sch. of Med.		(1908), (1912), (1916,	(1919) Kansas
Hospital College of Medicine, Louisville		(1896)	Kentucky
University of Louisville Medical Department		(1913)	Indiana
University of Minnesota Medical School		(1918)	Minnesota
Kansas City Medical College		(1904)	Kansas
John A. Creighton Medical College		(1919)	Nebraska
University of Nebraska College of Medicine		(1909)	Nebraska
Meharry Medical College		(1913),	(1907) Kansas
Memphis Hospital Medical College		(1910)	Arkansas
University of Nashville		(1899)	Kentucky

Massachusetts September Examination

Dr. Walter P. Bowers secretary, Massachusetts Board of Registration in Medicine, reports the oral, written and practical examination held at Boston, Sept. 14-16, 1920. The examination covered 13 subjects and included 70 questions. An average of 75 per cent. was required to pass. Of the 52 candidates examined, 23, including 2 osteopaths, passed, and 29, including 11 osteopaths, failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
George Washington University		(1916)	85.5
Loyola University		(1920)*	77.1
Indiana University School of Medicine		(1917)	75
Drake University College of Medicine		(1907)	89.2
State University of Iowa College of Medicine		(1920)	86.1
College of Physicians and Surgeons, Baltimore		(1910)	81
Maryland Medical College		(1912)	75
Boston University School of Medicine		(1920)	75
College of Physicians and Surgeons, Boston		(1920)	76.5
Harvard University		(1920)	78.5, 85.3, 85.5
Tufts College Medical School		(1920) 75, 75.7, 76.6,	77.1, 78.1
Jefferson Medical College		(1919) 77.8, (1920)	80.3, 80.8
Meharry Medical College		(1913)	75
Emory University School of Medicine	FAILED	(1920)	72.8
Chicago College of Medicine and Surgery		(1916)	65.8
Baltimore Medical College		(1902)	70.1
College of Physicians and Surgeons, Boston		(1919)	64.8, (1920) 61.5, 56.7, 71.
Middlesex College of Medicine and Surgery		(1917)	67.2, (1919) 69.6, (1920) 63.2, 63.4, 71.9.
Tufts College Medical School		(1919) 72.8, (1920)	68.7, 72.5
University of Vermont College of Medicine		(1920)	70
National University of Athens		(1908)	41.7‡
Queens University Faculty of Medicine		(1920)	71.9

* Diploma withheld until 1921, pending completion of internship.
‡ Graduation not verified.

Book Notices

TREATMENT OF THE NEUROSES. By Ernest Jones, M.D., M.R.C.P., President of the British Psycho-Analytical Society. Cloth. Price, $3.50. Pp. 233. New York: William Wood and Company, 1920.

This small book is more than a mere outline. The author has expanded in places and condensed in others in a manner that should stimulate the interest of the reader and lead him to a much more thorough conception of neuroses than is now the possession of most physicians. As the author says, neuroses constitute, perhaps, the most widely spread form of disease; hence the importance of the book. Jones has had ample experience with the neurotics. He has tried various means of treating them and has finally, as a follower of Freud, settled on psychanalysis. It is evident that the book is written, in part at least, as an answer to the critics of psychanalysis. An able, just and restrained answer it is, in view of the nature of the criticism aimed at the psychanalytic method. The treatment is approached from the psychic side, and those measures of a more material sort: rest, feeding and isolation (Weir Mitchell treatment), are appreciated because of their psychic influence. In the chapter on hysteria, which occupies the major portion of the book (135 pages), the author goes into the various standard forms of treatment, advocating psychanalysis after reviewing the others. This he is led to do because of the appreciation of the individuality of each patient. In emphasizing the need for individual consideration, he is expressing the idea of progressive physicians in their evolution toward a more intimate consideration of the patient as a man, not as a collection of separate organs and functions. The author's statement of the difficulties encountered in the treatment of the neuroses is comprehensive, and illuminates the entire problem of the mentally sick. Naturally, in a book of this size there is a paucity of examples. Besides the rather comprehensive chapter on hysteria, there are shorter chapters on anxiety neurosis, anxiety hysteria, neurasthenia, obsessional neurosis, hypochondria and fixation-hysteria, traumatic neuroses (including war shock), the prophylaxis of the neuroses, and a few pages on mental teatment of conditions allied to the neuroses.

QUATRE LEÇONS SUR LES SÉCRÉTIONS INTERNES. Par E. Gley, Professeur au Collège de France. Paper. Price, 7 fr. Pp. 154. Paris: J. B. Baillière et Fils, 1920.

This treatise on internal secretions differs from most works on the subject—it deals with general principles rather than with the individual organs that are supposed to produce such secretions; data in regard to the latter are presented chiefly to illustrate general principles. The work is a protest against loose, uncritical and unphysiologic habits of thought. This is well illustrated in the first lecture, on the historical development of the conception of internal secretions; the work of Claude Bernard, who proposed the term, is much more carefully and critically examined than is usual in works, even French works, on physiology. Gley shows that Bernard did not have the present-day conception of internal secretions; for him the dextrose produced from glycogen in the liver was the type of internal secretion, i. e., a chemical substance added to the blood which formed an essential part of this and having a nutritive rather than a dynamic function. The latter conception is due, according to Gley, to Brown-Séquard. In the second lecture, the author discusses the conditions that must be fulfilled before it can logically be asserted that an organ produces an internal secretion. One of these conditions, he states, is that the product of the gland must be detected by chemical or physiologic methods in the venous blood from the organ. This, however, is not considered sufficient: he believes that even if a characteristic product is found, but disappears rapidly and cannot be found in the arterial blood, the rôle of the gland as an organ of internal secretion is not demonstrated. He illustrates this point by a critical examination of the claims made for the suprarenal glands as organs producing epinephrin as an internal secretion; this has been one of the most generally accepted illustrations of an internal secretion. The author recalls that the investigation of these glands has passed

through three phases; first, the effects of the removal of the glands which simply showed that they were in some way essential for life; second, the phase when conclusions were drawn from the action of extracts of the glands, a method of study which may lead to erroneous conclusions as to the real function of an organ; and, lastly, the study of the properties of the blood coming from the glands. The author rejects both the theory according to which the maintenance of a normal blood pressure and the excitability of the vasomotor and other nerves are due to the secretion of epinephrin, and the so-called emergency theory, according to which the glands respond, under various conditions, with a secretion of epinephrin in amounts sufficient to be of real importance to the organism. He also believes that the conception of pathologic conditions in which there may be an excess or a diminution of the secretion of epinephrin is without foundation. In fact, he concludes that epinephrin is probably an excretion of the suprarenals without physiologic importance, and that it cannot properly be called a secretion at all; the real importance of the suprarenals for life he sees in the cortex of the glands. In the third lecture the author discusses the experiments made with organ extracts, believing that this method is of little value in answering the question whether a given organ produces an internal secretion; he protests against the rash theories and premature generalization so common in this field, and speaks somewhat ironically of much of the present-day opotherapy. In the fourth lecture he discusses the correlation in the activities of the organs brought about by chemical stimulants (the relation of carbon dioxid to the respiratory movements, of hydrochloric acid to the pylorus, of the thyroid to metabolism, the action of secretin, etc.) and finally, the relation of various organs to growth, development and differentiation. The book is written in an interesting style, and the recent American work on the subject receives rather more consideration than is often the case in foreign publications.

LAS AMPUTACIONES CINEPLÁSTICAS. Por el Dr. Guillermo Bosch Arana, Profesor suplente de Medicina Operatoria, Cirujano del Hospital Piñero. Con Prefacio del Dr. Diógenes Decoud, Profesor y Académico de la Facultad de Medicina de Buenos Aires, y Tres Cartas Documentadas del Profesor Giuliano Vanghetti, Médico Jefe de la Cruz Roja Italiana. Paper. Pp. 352, with 194 illustrations. Buenos Aires: La Semana Médica, 1920.

The author is the leading exponent in Argentina of the recent art of kineplasty, to which the war gave such a tremendous impulse. In his effort to cover the subject thoroughly, he has divided his book into three parts, one devoted to the surgical aspects of the question, another to prosthetic appliances, and the other comprising the personal contributions of Dr. Bosch Arana. The first chapter contains a brief but rather complete historical review of physical reconstruction, beginning with Celsus' attempts, until we come finally to Vanghetti's epoch-making work, which the author praises highly and justly. The abundant illustrations are interesting and show what the author has accomplished, not only with other physicians' methods and apparatus, but also with his own, particularly his ergograph to measure the emplitude and power of movements. Dr. Bosch Arana's book is an important contribution to a field in which he is undoubtedly a leader. Strange to say, however, in his extensive bibliography not one reference can be found to American or English authors, which seems a serious defect in a work of this character.

DE LA INQUIETUD A LA REVOLUCIÓN: DIEZ AÑOS DE REBELDÍAS UNIVERSITARIAS. 1909-1919. Por el Dr. Carlos Enrique Paz Soldán. Paper. Pp. 209. Lima. Biblioteca de "La Reforma Médica," 1919.

Dr. Paz Soldán, the Peruvian educator and medical journalist, has collected in this book the addresses on medical education delivered by him during the decade 1909-1919. This period embraces the educational crisis in Peru, which found its climax in the recent changes in the university personnel and teaching methods in that country. Dr. Paz Soldán studies several phases of this serious teaching problem, especially as regards his participation in the various steps in the conflict between professors and students. The book is in a way a chronological story of the movement, although its polemical and oratorical form detracts somewhat from its value.

Medicolegal

Practicing Without License Not Joint Offense

(State v. Mitchell et al. (Mo.), 219 S. W. R. 977)

The Springfield (Mo.) Court of Appeals says that defendants Bessie A. Mitchell and Ruby Lee Vinson were jointly charged in an information with having unlawfully practiced medicine and surgery, and with having attempted to treat the sick or others afflicted with bodily or mental ailments, without having a license from the state board of health. The trial resulted in a verdict of conviction and an assessment of a fine of $50 against each defendant. But the judgment of the lower court is reversed because the information charged an impossible offense, that is, an offense which could not be jointly committed. The practice of medicine is not in and of itself a crime and it becomes one in Missouri only through a personal default of the defendant who does not secure a license from the state board of health. It is a strictly personal offense, and not one that can be a joint offense.

Circumstantial Authentication of Roentgenogram—Admissible Evidence When Roentgenogram Is Lost

(Quinn v. Flesher (W. Va.), 102 S. E. R. 300)

The Supreme Court of Appeals of West Virginia says that, in this personal injury case, the roentgenologist, who made a roentgenogram of the plaintiff's injured hip, and another physician examined the plate after it was developed, and determined from the information received from the plate and from an examination of the injured leg that there was a fracture of the hip bone. After that the plate was mislaid, and it could not be found at the time of the trial, although thorough search was made for it. Still these physicians were permitted to testify that it disclosed a fractured hip bone. The defendants contended that this was error, first, because it was not shown that the roentgenogram was so taken as to represent correctly the object sought to be photographed; and, secondly, because the roentgenogram itself being secondary evidence and it being lost, no testimony could be offered based on a view of it. But the court holds that there was no error in either respect.

It is quite true that before a roentgenogram can be used as evidence it must appear that it was so taken as to represent correctly the object reproduced. Of course, it is not meant by this that some one must testify that it is in fact a correct representation. Manifestly, this would be impossible for the reason that the object thus photographed is not visible except with the aid of the roentgen-ray machine. What is meant is that it must appear that the machine was so placed as to reproduce correctly the object brought within the radius of its activity. Nor need this necessarily appear by a direct statement of the operator to this effect, although it may be, and ordinarily is, shown in that way. It may, however, as well be shown from a detail of the circumstances. In this case the physician who took the roentgenogram was shown to be an expert with large experience in this work. The picture was taken with a view of determining the nature and extent of the plaintiff's injury with a view to treating it, and treatment was administered for the relief of the injury which the roentgenogram disclosed, with favorable results. This might not prove absolutely that the plaintiff was injured as disclosed by the roentgenogram, but the fact that the injury sustained by her responded to the treatment ordinarily administered for the relief of an injury such as that shown by the roentgenogram was, to say the least, very strong evidence that her injury was of that character, and sufficiently authenticated the roentgenogram to justify its admission in evidence.

Was it proper for the two physicians who examined this roentgenogram to testify as to what it indicated? It seems to be very generally held that, where the original of a document is lost, a copy made from a copy may be introduced in evidence on a showing of the correctness of the first copy and the loss thereof. It is the best evidence obtainable. In this

case, if we treat the roentgenogram as but a copy of the then existing condition, we have the original, which was the condition of the bone at the time, lost by a change in the conditions due to a lapse of time and the treatment administered, the only reproduction of that condition is lost, and the best evidence obtainable as to what condition actually existed at that time is the impression made on the minds of the two physicians from their examination of the plaintiff's hip and the roentgenogram thereof. It was not error to admit this evidence.

Furthermore, the court holds that where, after the trial of an action to recover damages for injuries sustained from a broken bone has been entered on, the defendant requests that a roentgenogram be made of the injured member, and the plaintiff is willing that it should be done, it is not error for the court to refuse such request where no reason is given for not having made the same before the trial, and it does not appear how long the trial will be delayed by granting such request.

May Sue Insurers—Proper Charges of Surgeon

(Home Life & Accident Co. v. Cobb (Texas), 220 S. W. R. 131)

The Court of Civil Appeals of Texas, in affirming a judgment for $150 in favor of defendant Cobb, a physician, holds that, under the workmen's compensation law of Texas of 1917, physicians may sue the insurers of employers for medical services rendered to injured employees. The court says that this action was brought to set aside an award of the industrial accident board, it being a case in which a claim was made by the physician to recover on an alleged agreement, either implied or specific, to pay for services rendered to an employee whose employer was insured by the plaintiff, under the workmen's compensation law. It was found that the physician was called to administer surgical and medical treatment to the employee, either at the request of the employer or with the latter's knowledge immediately after the injury that he had been called, and that the employer notified the plaintiff insurer shortly after the accident of the injuries sustained by the employee, and that the defendant was treating the injuries, to which neither the plaintiff nor the employer objected; nor did either of them furnish any other physician to treat the employee. The court holds that the plaintiff had sufficient notice to render it liable for the defendant's services. Furthermore, the court holds that a cause of action was given directly to the physician by the provision of the law that "the employee shall not be entitled to recover any amount expended or incurred by him for said medical aid, hospital services or medicines, nor shall any person who supplied the same be entitled to recover of the association therefor, unless the association or subscriber shall have had notice of the injury and shall have refused, failed or neglected to furnish it or them within a reasonable time."

The plaintiff contended that there was error in rendering judgment against it for $150, because it appeared that the defendant had served the injured employee for a period of eight weeks, and that his charge for that service was $150, whereas the law makes the insurer liable for the medical bill for the first two weeks only. But the evidence showed that the treatment given was of a surgical nature; that that given after the first two weeks was only of an incidental character, and that the value of the services during the first two weeks was $150. The trial court found that, from a medical and surgical standpoint the injury was practically well at the expiration of two weeks; that while the patient remained in the hospital for about two months, the treatment after the first two weeks was only occasional and of an incidental character, for the purpose of seeing that the limb was in place and that no complications had arisen; that it is usual, in surgical cases like this one, for physicians to charge for the case, and not usual to charge for each visit or treatment; and that the fair and reasonable value of the services rendered by the defendant during the first two weeks was $150. Under these circumstances, the court of civil appeals holds that there was no error in the respect alleged.

Nor does this court think that there was error to the prejudice of the plaintiff in including in the judgment the sum of $25, as the reasonable value of the services of an assistant to the defendant. It was urged that in the evidence and allegations there was nothing to show that Dr. Cobb was the owner of any cause of action for $25 for the services of an assistant, or had the right to sue therefor, or that such sum had been paid or liability for it incurred by him. But this was Dr. Cobb's case, and he assumed the responsibility for the proper handling of it, and as a part of his duty he provided an assistant for the operation. It was necessary for him to have this assistant, but no charge was made against the employee or against the association for the same. This item was material only in determining the reasonableness of the defendant's charge. The court denied the plaintiff a rehearing.

Society Proceedings

COMING MEETINGS

American Physiological Society, Chicago, Dec. 30.
District of Columbia, Medical Society of, Washington, Dec. 1.
Hawaii, Medical Society of, Honolulu, Nov. 18-20.
Medical Association of the Southwest, Wichita, Kan., Nov. 22-24.
Porto Rico, Medical Association of, Ponce, Dec. 13-14.
Radiological Society of North America, Chicago, Dec. 16-17.
Society of American Bacteriologists, Chicago, Dec. 28-30.
Southern Minnesota Medical Association, Mankato, Nov. 29-30.
Southern Surgical Association, Hot Springs, Va., Dec. 14-16.
Western Surgical Association, Los Angeles, Calif., Dec. 3-4.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA

Seventieth Annual Session, held at Harrisburg, Oct. 4-7, 1920

(Continued from page 1369)

Rectal Drainage for Pelvic Abscess

DR. ROBERT M. ENTWISLE, Pittsburgh: The drainage of a pelvic abscess through the anterior wall of the rectum is not meant as a substitute in any way for the accepted approach through the abdominal wall, but is reserved for the cases that do not do well following operation and in which there is found a large, bulging mass in the pelvis which obviously is not draining through the original incision. The operation is simple; the results, gratifying.

Abdominal Drainage

DR. ARTHUR E. CROW, Uniontown: Little, if any, danger can come from the establishment of drainage in all our borderline cases in removal of the gallbladder. Too often the abdomen is closed and the mistake closed with it, when drainage would have saved the day. This happens more often in appendicitis than in any other abdominal trouble. Any penetrating wound of the abdomen certainly demands immediate operation and drainage.

Diagnosis of Chronic Appendicitis: Its Relation to an Enlarged Cecum

DR. RICHARD J. BEHAN, Pittsburgh: Chronic infection in the appendix is frequently secondary to pericecal and periappendical adhesions rather than the result of such infection. The symptoms are those arising from dilatation of the bowel, which, in turn, interferes with neighboring organs; those resulting from toxic material, and those resulting from stimuli reflected to adjacent organs. These are pain or discomfort in the right iliac region and constipation; in the toxic types, pains in the limbs, thyroid enlargement, slight fever, rapid pulse, headache and exhaustion; in some cases, heartburn, vomiting and palpitation.

Appendicitis in Children

DRS. EMORY G. ALEXANDER and WALTER B. MCKINNEY, Philadelphia: In this series the ages run from 19 months to 15 years. The symptoms are more marked than in the adult. Diagnosis is more difficult as history and examination are less definite. Peritonitis is frequent as a complication. Rectal examination should never be omitted. Prognosis is good if recognized and operation performed early. Chronic appendicitis is encountered. The greatest mortality is due to

peritonitis and intestinal obstruction. The cases in which purgatives have been given furnish the highest percentage of morbidity and mortality.

DISCUSSION

DR. SILAS D. MOLYNEUX, Blossburg: Our records in abdominal drainage are not better because we do not drain rather than because we drain too much. When in doubt, one should drain. However, the type of infection will help to determine whether or not we should drain. In cases of tuberculosis, ordinarily it is a wise thing not to drain. In old gonococcal infections in the pelvis, or other types of infection of long standing, it is not always necessary to drain for the reason that the pelvic peritoneum will take care of infections so well. Ordinarily, we drain too much in the upper abdomen. When it is necessary to drain, I think we do not drain thoroughly enough. Several small tubes are better than one large tube, perhaps one in the pelvis, one in the cecum and one in the right kidney fossa. Two or three small tubes will carry off more pus than one large tube. It is better to leave the incision without any sutures at all than to close it up tight. In placing the drain it is important not to impinge on the small bowel. A drain here often causes bad adhesions and intestinal obstruction and consequently we should keep drains as far away as possible from the small intestine.

DR. CHARLES A. FIFE, Philadelphia: As a pediatrician, I object to the use of castor oil in appendicitis, and heartily endorse the plan to turn over to the surgeon every case suspicious of appendicitis in children. At Girard College the boys are encouraged to report at once to the infirmary for the slightest disorder, particularly so-called "stomach ache" and "bilious attacks." Dr. Wharton says that boys who have pain early in the morning are operated on at 11 o'clock, and in that time more than 90 per cent. of his cases require drainage, showing the rapid advance in children, particularly in the older children.

DR. WILLIAM L. ESTES, South Bethlehem: A mistake made frequently is that of diagnosing for appendicitis a case of pneumonia on the right side. Time and time again, cases of so-called appendicitis have been sent to me for immediate operation which I have found on more careful investigation to be cases of pneumonia. In reference to the drainage question, every case has to be judged on its own individuality. If pus is present, one should, as a rule, drain. A very small quantity of localized pus can be blocked off. I have always felt that when pus is present in the abdomen, it is necessary to protect the abdomen by drainage; and dependent drainage, where it may be had, is the proper drainage.

DR. F. HURST MAIER, Philadelphia: The old axiom, "When in doubt, drain," should be replaced by the more modern axiom, "When in doubt, do not drain." There are few cases of pelvic surgery in which it is necessary to drain. Drainage carries with it a great deal of morbidity. One of the greatest bugbears in surgery today concerning morbidity and also concerning the secondary mortality is postoperative adhesions, and they are more frequently the result of drainage than of any other factor.

DR. J. DE V. SINGLEY, Pittsburgh: The purpose of a drain is not to favor the outpouring or the withdrawal of the products of infection from the abdominal cavity. If the primary focus of infection has been removed or closed, a drain stimulates the throwing out of an inflammatory exudate which localizes the infection. The omentum is the best abdominal drain. The function of the omentum is to wall off and isolate areas of infection. The material used for drainage, when drainage is absolutely demanded, is of the greatest importance. I am strongly opposed to glass or rigid rubber tubes. They are a frequent cause of pressure necrosis, with, occationally, disastrous results. Rubber dam or a soft collapsible rubber tube is infinitely superior. Gauze of any type is one of the worst drains. It commonly results in fecal fistula.

DR. EMORY G. ALEXANDER, Philadelphia: I operated on a boy, 11 years of age, who walked into the hospital with a large pelvic abscess. He had been playing around all the week. I know of no condition so hard to diagnose as appendicitis in childhood. Especially is this true in cases in which there are symptoms of pneumonia. We have kept patients under observation in the hospital, with all the facilities for making examinations and laboratory tests, and have been unable to make a positive diagnosis for several days. In these cases it is much wiser to wait for symptoms to aid in making a correct diagnosis. In regard to drainage, I use rubber dam, cigaret drain, and rubber and glass tubes. If one wishes to drain, one must use a glass tube. It requires some nursing, there is a slight danger of its breaking, and according to statistics it seems to favor the formation of a fecal fistula. Our statistics, however, do not bear that out. We have had only one fecal fistula in 500 cases. If one puts the glass drainage tube into the pelvis, it stays there; put a rubber tube in and transport the patient back to bed, and frequently it becomes dislodged. We take out the glass tube in twenty-four or thirty-six hours and put a rubber tube in its place.

Acute Traumatic Surgery of the Abdomen

DR. LEVI J. HAMMOND, Philadelphia: Every injury to the abdomen, however slight it may appear at the time, should be considered and treated as if known to be grave, for death may ensue from apparently slight blows. About 10 per cent. of the serious injuries affecting the body involve the abdominal viscera. A blow which does not produce a visible injury to the abdominal wall may contuse or rupture organs within. The immediate and serious effect of these concealed injuries is hemorrhage and rupture of hollow viscera, with infection. Shock also occurs. Median laparotomy is the only certain means of ascertaining the extent of the injury and the source of the hemorrhage. In punctured wounds of the abdomen, the seriousness depends on the degree of injury to the viscera. Early operation is the safest rule to follow, even though the abdomen may, at times, be needlessly opened. Leukocytosis in hemorrhage is not, as held by some, a reliable factor.

DISCUSSION

DR. JOHN O. BOWER, Wyncote: I agree with Dr. Hammond that every abdominal injury should be considered a surgical case potentially. I have had a different experience with the leukocyte count in practical diagnosis. In every case that came into the hospital in the last ten years a leukocyte count has been made. In every instance the degree of hemorrhage has been commensurate with the amount of leukocytosis. There was only one case in which a leukocytosis was found in which operation was not done, and that was a case of ruptured spleen. The patient was treated expectantly for forty-eight hours. At the end of that time he was given a bottle of citrate by mistake, and within an hour his abdomen was filled with blood. In cases of rupture of hollow viscera in the abdomen we do not depend on the leukocyte count because that would cause delay. Abdominal rigidity is sufficient evidence for exploratory laparotomy. There is an advantage in operating under spinal anesthesia.

DR. SAMUEL D. SHULL, Chambersburg: In cases of penetrating wounds of the abdomen, an operation should be performed immediately if the patient can be taken to the hospital at once. Blows and contusions of the abdomen can be studied a little while longer than penetrating wounds.

DR. WILLIAM L. ESTES, South Bethlehem: I would emphasize the importance of opening the abdomen early. There is no doubt as to what ought to be done in a penetrating wound of the abdomen below the epigastrium, whether from gunshot or other object. There is always more or less injury to the contents of the abdomen. There will certainly be hemorrhage, and frequently very large perforations of the viscera. The leukocytosis varies much. I have made it a rule to have a leukocyte count made almost immediately; when there is a great deal of hemorrhage, there is a relative diminution of the number of red corpuscles and an increase in the white cells In some cases there is an almost immediate increase in the leukocytosis, but it varies so much that I have learned to disregard it almost entirely. If there is vomiting, and distention of the abdomen, with signs of shock, I should advise that the abdomen be opened at once.

DR. HUGH E. MCGUIRE, Pittsburgh: No man should receive morphin until we know what is wrong with him. If we find a small area of contusion and the temperature rises to 100 F.,

the abdomen is opened. If you wait until vomiting and all the symptoms of ruptured bowel set in, nine tenths of the patients are going to die. One can operate and obtain information. I would rather do this and be mistaken than have a patient die. I make it a rule to operate in the first six hours, if possible.

DR. JOHN P. GRIFFITH, Pittsburgh: One sign of peritoneal trauma is greatly reduced peristaltic action. The next valuable point in diagnosis is tenderness at or near the site of trauma. A hemorrhage that will diffuse over the peritoneal cavity may not produce much shock, but it will produce a cessation of peristalsis within five or six hours of the trauma.

DR. RICHARD J. BEHAN, Pittsburgh: One factor of value in diagnosis in traumatism of the abdomen is cessation of abdominal respiration. It comes on as quickly as does the rigidity of the abdominal muscles.

Early Diagnosis of Perforated Gastric and Duodenal Ulcer

DR. WILLIAM L. ESTES, JR., South Bethlehem: Early diagnosis of perforation of a gastric or duodenal ulcer can be made in the vast majority of instances by the severe, sudden pain, a history of previous indigestion, boardlike abdominal rigidity, and marked retraction of the upper abdomen sufficient to cause a transverse line just above the level of the umbilicus. In atypical cases, a roentgenogram of the abdomen for the detection of gas along the diaphragmatic line and a shifting tympany over the liver in the lower axilla may serve to identify a perforated digestive ulcer.

Gastro-Enterostomy

DR. HAROLD L. FOSS, Danville: Gastro-enterostomy, though one of the most valuable of operations, and, in point of results, the most satisfactory treatment for duodenal ulcer, yet occasionally is followed by disappointment, often because of faulty technic or mechanical defect in the operation. Among the commoner untoward results are vicious circle, gastrojejunal ulcer, reactivation of the original ulcer, the production of new ulcer, and malignant degeneration in a gastric ulcer already established. Of the mechanical defects, the commonest are to be found in the use of a button, bobbin or similar device for intestinal anastomosis; the formation of a long jejunal loop; the Roux or Y technic; such complex procedures as that of Ehrlich or Vulliet; use of the anterior operation; failure to locate the stoma properly; failure to make an opening of sufficient size: the use of nonabsorbable suture; failure to funnel the stomach through the transverse mesocolon properly; infection during the operation with formation of adhesions; the performance of gastro-iliostomy; failure to combine with surgery careful postoperative medical treatment; operation without sufficient lesion, or lack of thoroughness at operation, such as removal of remote sources of infection.

DISCUSSION

DR. CHARLES H. FRAZIER, Philadelphia: A point that ought to be emphasized is regulation as to the care of the patient after the operation is performed. Common sense dictates that a patient who has had an ulcer and a gastro-enterostomy cannot resort to the diet of a person who has a perfectly normal stomach. We are justified in recommending the administration of alkalis repeatedly throughout the day; and it is to the patient's advantage for a considerable period after the operation has been performed to restrain his diet in regard to quantity, and resort as far as possible to frequent feedings—light breakast, something between breakfast and lunch, something between lunch and dinner and then, perhaps, a little when the patient goes to bed. In other words, he should have, instead of three feedings, six, and the use of alkalis before each feeding and perhaps in the interval between.

DR. ROBERT T. MILLER, Pittsburgh: Mayo Robson estimated that of those patients who came to operation twelve hours after perforation, one third died within twenty-four hours, and of those who came after forty-eight hours, virtually 100 per cent. died. It is obvious that early diagnosis is essential. The difficulty is not with the surgeon; the difficulty lies with the man who first sees the patient and who temporizes, using a little morphin and a hot water bag, letting the family down easy. The surgeon operates as soon as he sees the patient.

DR. DONALD GUTHRIE, Sayre: Dr. Estes spoke of the early history as being a factor in the diagnosis of perforation of acute ulcer. I have noticed several times in my work that we had what I believed were acute and septic ulcers, not old chronic ulcers that had perforated, but acute septic ulcers that had perforated without any previous history of indigestion. I have not taken the patients' word that they had never had stomach trouble previously, because it is hard to get a history from one so acutely ill as they are; but I have gone to the families of these patients and tried to get a history of former stomach trouble. I have had six cases of this sort in my experience. One should not rely on the history of chronic indurated ulcer in order to increase his assurance that the case under consideration is a perforated duodenal ulcer. There is no class of cases in which the surgeon should cooperate with the internist more than in these cases. Perhaps the jejunal ulcer may be prevented by giving these patients large, frequent and heavy doses of alkalis immediately after operation, continuing these alkalis and being sure that the diet shall be regulated under the direction of a live, well informed medical man and that the alkalis be continued for many months following the operation.

DR. J. STEWART RODMAN, Philadelphia: I recall one case in which there was entire absence of shock, and that was the only one in the series. A soldier walked to his tent two hours after perforation; his pain continued, and he came to the hospital three hours after the perforation. He made a good recovery. In one case the shock was so severe that when the patient reached the hospital it was impossible to do anything. In perforation of a hollow viscus, loss of peristalsis is the almost infallible diagnostic sign. As far as one can lay down a rule, I believe it is better not to do a gastro-enterostomy in these cases. Gastro-enterostomy was first proposed as a palliative procedure, and it has remained that for gastric ulcer until the present time and always will. It is a curative procedure so far as duodenal ulcer is concerned; but unless it is combined with destruction of the ulcer, in gastric ulcer it is certainly nothing but a palliative procedure.

DR. W. WAYNE BABCOCK, Philadelphia: When a gastro-enterostomy is performed it cures about 85 per cent. of duodenal ulcer patients. When the ulcer is in the stomach and up along the lesser curvature, the percentage of cures by gastro-enterostomy drops very low. The normal antidote to the acid chyme is the bile. Owing to this fact, about a year ago I stopped performing gastro-enterostomies for ulcer, and planted the gallbladder into the ulcer-bearing area. If the ulcer was in the stomach, I excised the ulcer and implanted the gallbladder into the orifice that was left. Thus, a normal alkali was given which is supplied by the body for the rest of the patient's life. In several roentgen-ray studies we have found no food or bismuth regurgitating into this gallbladder. In about 200 cases the evidence during the first two years is that secondary complications are rare, and the patients live very comfortably with the bile running into the stomach. The patients show rapid improvement and get along just as well as they do after gastro-enterostomy, I rather think, better.

DR. MOSES BEHREND, Philadelphia: It has been my custom to perform a gastro-enterostomy in every case of perforation. Recently, I tried the operative procedure of not doing a gastro-enterostomy. The results were just as good, but time is still too short to compare these cases in which I did a gastro-enterostomy and those in which I did not do it. It seems that whatever method is used, with proper technic patients will recover. I do not believe that a nonabsorbable material is responsible for the gastrojejunal ulcer.

DR. EMORY G. ALEXANDER, Philadelphia: We have had fifty cases of perforative duodenal ulcer in the last ten years. The great majority of patients gave a distinct history of stomach trouble. The symptom we lay stress on is sudden onset and rigidity of the right rectum. Absence of liver dulness is of some value. The majority of surgeons, however, do not believe that to be of any marked value because they do not know the normal liver dulness for that patient.

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, New York

October, 1920, **160**, No. 4

*Diagnosis of Gallbladder Disease. W. F. Cheney, San Francisco.—p. 469.
*Involvement of Auricle and Conduction Pathways of Heart Fololwing Influenza. W. W. Hamburger, Chicago.—p. 479.
*Determination of Need of Surgery in Peptic Ulcer; Gastro-Enterostomy. W. A. Bastedo, New York.—p. 491.
Principles Underlying Safe and More Rapid Evolution of Thoracic Surgery. W. Meyer, New York.—p. 504.
Surgical Treatment of Pleurisy. J. L. Yates, Milwaukee.—p. 512.
*Can the Gallbladder Biliary Ducts and Liver Be Drained Medically? B. B. V. Lyon, Philadelphia.—p. 515.
*Glucose as an Adjunct in Therapy of Pneumonia. H. J. John, Cleveland.—p. 542.
*Relative Toxic Effects Produced by Regional Radiation. W. Denis and Charles L. Martin, Boston.—p. 555.
Epidemic Encephalitis: A Review of 115 American Cases. A. D. Dunn and F. W. Healey, Omaha, Neb.—p. 568.
After-Care of Arrested Cases of Essential Epilepsy. L. P. Clark, New York.—p. 582.
*Virulent Diphtheria Bacilli Carried by Cats. J. S. Simons, Takoma Park, D. C.

Diagnosis of Gallbladder Disease.—The history, in Cheney's opinion is the most valuable aid in the recognition of gallbladder disease. When this is characteristic, it makes the diagnosis, no matter whether or not at a given time signs are found by physical examination, no matter what the stomach analysis shows, no matter whether the roentgen-ray report does or does not present any direct or indirect evidence. When the history is less characteristic, it still remains the most important factor in diagnosis; but physical examination comes next in value and may give signs that with the history serve to remove all doubt, regardless of laboratory and roentgen-ray reports. When the history alone makes one only suspect, all the clues to be had from physical signs, secretory disturbances and roentgen-ray shadows are needed to pass beyond the suspicion that the gallbladder is diseased. At last it is the history that settles the matter by introducing an attack of biliary colic. Thus, in the diagnosis of gallbladder disease, old and well tried methods are the most useful; careful and painstaking history and such facts as can be elicited by the unaided senses—by sight and by touch particularly. Cheney does not neglect any possible laboratory or instrumental aid, but he places most reliance on what the patient tells him and on what he sees and feels for himself.

Postinfluenzal Heart Complications.—Six cases of postinfluenzal myocardial involvement are reported by Hamburger, involving particularly the auricle and conduction pathways of the heart. From a survey of the literature, together with clinical and electrocardiographic studies, a grouping of postinfluenzal cardiac complications is offered as follows: (*a*) Fatal cases showing acute parenchymatous degeneration and vacuolization of the myocardium. (*b*) Nonfatal, acute cases, showing involvement of auricle and conduction system during height of infection, with complete restoration to normal cardiac mechanism with subsidence of infection. Duration two to six weeks. (*c*) Nonfatal chronic cases with arrhythmia and involvement of the auricle persisting and causing partial invalidism long after subsidence of acute infection. Duration: twelve to seventeen months plus. Suggestion is offered that acute respiratory infections (influenza, streptococcus) single out early the auricle and conduction pathways of the heart.

Surgical Treatment of Stomach Ulcer.—Given a thorough medical trial by some one competent to supervise the treatment, Bastedo considers those cases surgical which continue to show: (1) persistent or recurrent hemorrhage even small in amount; (2) pain; (3) nausea; (4) pylorospasm of such persistence as to simulate pyloric stenosis; (5) inability to ingest comfortably the ordinary wholesome foods permitted by the circumstances of the patient, this making the poor patient a surgical case earlier than the well-to-do patient; (6) inability to ingest comfortably enough food to maintain nutrition while living a normally occupied life; (7) recurrence after apparently a cure.

Drainage of Biliary Ducts.—A paper by Lyon published in THE JOURNAL, Sept. 27, 1919, p. 980, described his method of direct (hormonic?) stimulation of the contrary innervation of the gallbladder and the duct sphincter, to drain the biliary system, to actually empty the gallbladder, partially or wholly of its fluid contents and so segregate the several biles recovered in such a manner as to make it practically possible to make certain differential diagnostic inferences as to the state of health or disease of the several components of the biliary system in a scientifically correct manner.

Glucose in Treatment of Pneumonia.—John relates his experience with the intravenous injection of glucose in the treatment of pneumonia. More than two doses per day were rarely necessary. It made the patient comfortable; produced sleep and rest; reduced the temperature; increased the elimination through kidneys and skin, and slowed the heart and increased the pulse volume. Any febrile condition is an indication for its use. John used 250 c.c. of a 10 per cent. solution in physiologic sodium chlorid solution with morphin sulphate, 0.008 gm.; atropin sulphate, 0.00064 gm.; tincture digitalis, 1 c.c. All of the glucose is used for bodily nutrition. Repeated tests for sugar in the urine failed to show it in carefully collected specimens, except once when a trace was found. Practically all the medication can be supplied in the glucose, thus a much more accurate dosage can be depended on. The antipneumococcic serum Type I, the antistreptococcic serum or the antitetanic serum, can be administered in this glucose medium.

Toxic Effects Produced by Regional Radiation.—According to Denis and Martin a definite massive dose of roentgen-rays administered to the body of a rabbit produces a severe systemic reaction and death only when some portion of the intestinal tract lies within the irradiated area. It is possible to produce a definite acidosis (lowering of the alkali reserve) in rabbits by administering a heavy dose of roentgen-rays over the abdomen. Such animals give no evidence of suffering from a "roentgen-ray nephritis." The results suggest the hypothesis that acidosis may be a factor in "treatment sickness" following abdominal irradiation.

Diphtheria Carried by Cats.—A curious case is cited by Simmons. An elderly lady developed a fatal diphtheritic pharyngitis after close contact with a cat (A) which had been sick one week. A second cat (B) which had been in contact with the first cat (A) became sick and died ten days later. The patient had a grayish-brown pseudomembrane covering her uvula, tonsils and posterior pharynx. Cat A had a small yellowish-gray pseudomembranous ulceration in the left nasal passage and Cat B showed ulcerations of both vocal cords, covered with a grayish-white false membrance. Diphtheria bacilli of intermediate virulence for guinea-pigs were isolated from all three lesions.

American Journal of Public Health, Chicago

October, 1920, **10**, No. 10

Endemic Diseases vs. Acute Epidemics. M. P. Ravenel, Columbia, Mo.—p. 761.
What Can a Community Afford to Pay to Rid Itself of Malaria? L. M. Fisher, Columbia, S. C.—p. 768.
Status of State Bureaus of Child Hygiene. A. E. Rude, Washington, D. C.—p. 772.
Industrial Health Education: A Means and an End. J. Schevit. p. 780.
Truth in Advertising Drug Products. A. J. Cramp, Chicago.—p. 783.
Geographical and Seasonal Variations in Infant Mortality in the United States, 1917-1920. F. S. Crum, Newark.—p. 790.

Arkansas Medical Society Journal, Little Rock

October, 1920, **17**, No. 5

Evidence of Gastro-Intestinal Disease as Revealed by Roentgenologic Examination of Digestive Tract. D. A. Rhinehart, Little Rock.—p. 107.
Cancer; Early Recognition and Treatment. D. Gann, Jr., Little Rock.—p. 112.

Boston Medical and Surgical Journal

Nov. 4, 1920, **183**, No. 19

Interpretation of Wassermann Reaction. W. P. Boardman, Boston. p. 537.
Diagnosis of Primary Syphilis. H. D. Lloyd, Boston.—p. 540.

*Lead in Urine in Neurocirculatory Disturbances. C. A. McDonald and H. McCusker, Providence, R. I.—p. 543.
Review of Recent Work on Amebic Dysentery. W. Allan, Charlotte, N. C.—p. 545.
After-Treatment of Dislocated Elbow. E. T. Saeger, Boston.—p. 548.
*Use of Thermometer in Mental Diseases. E. D. Bond, Philadelphia. —p. 550.

Lead in Urine in Neurocirculatory Disturbances.—Twelve cases representing nervous disorders of many types are recorded by McDonald and McCusker. Not one of them showed signs of lead poisoning, Like the lead line, anemia, or stippling. It was only by making a routine urinary for lead in doubtful cases that the lead element was discovered. These cases are reported to stimulate corroboration or refutation of Chapman's standard, that 0.4 mg. of lead per liter of urine is sufficient to cause symptoms; and secondly, to argue for the consideration of lead as the etiologic factor, or one of the etiologic factors, in obscure cases presenting neurologic signs and symptoms.

Fever in Mental Diseases.—The relation of increased bodily heat to mental diseases is discussed by Bond. He believes that more fevers would be shown to occur in cases of mental disease if records were made more as a routine, and also if it did not take so much time and trouble to get records on disturbed and resistive patients. In seventy-one mental patients, fevers, slight or severe, transitory or chronic, occurred in over 50 per cent., a surprising result for consecutive cases. The diagnoses varied and show that fever occurred in imbecility, epilepsy, arteriosclerotic dementia, general paralysis, dementia praecox and manic depressive psychoses. Of nineteen manic depressive insanity patients, thirteen had fever and six did not. Of nineteen dementia praecox patients eight had fever and eleven did not, this being the only disease in which normal temperatures were found more often than the reverse. Bond records the results of an examination of the temperature charts found in these consecutive cases, singly and in groups.

Colorado Medicine, Denver

October, 1920, **17**, No. 10

Future of Medical Education in Colorado. C. N. Meader, Denver. —p. 254.
Need of Psychopathic Hospital in Colorado. G. A. Moleen, Denver. —p. 261.
Freud in 1920. C. S. Bluemel, Denver.—p. 265.
Work of Colorado State Board of Health. R. L. Drinkwater, Denver. —p. 268.

Endocrinology, Los Angeles

July-September, 1920, **4**, No. 3

*Classification of Disorders of Hypophysis. W. Engelbach, St. Louis. —p. 347.
Hemorrhagic Syndrome Cured by Thyroidin. L. P. Battaro and J. C. M. Fournier, Montevideo, Uruguay.—p. 366.
Pubertas Praecox with Especial Attention to Mentality. J. H. Leiner, New York.—p. 369.
Endocrine Secretion of Hen Feathered Fowls. T. H. Morgan, New York.—p. 381.
Pharmacodynamic Subepidermal Tests: II. Indirect Tests; (A) Thyroidin. M. Ascoli and A. Fagiuoli, Catania, Italy.—p. 387.
Disorders of Thyroid: Hypersensitiveness Test with Especial Reference to "Diffuse Adenomatosis" of Thyroid. E. Goetsch, Brooklyn.—p. 389.
*Hypopituitarism; Report of Case. H. H. Lissner.—p. 403.
Effects of Inanition on Suprarenals. S. Vincent and M. S. Hollenberg, Winnipeg, Canada.—p. 408.
Rôle of Endocrine Glands in Certain Menstrual Disorders; Primary Dysmenorrhoea and Functional Uterine Bleeding. E. Novak, Baltimore.—p. 411.
Effect of Subcutaneous Injections of Thymus Substance in Young Rabbits. A. W. Downs and N. B. Eddy, Montreal.—p. 420.

Disorders of Pituitary.—The classification made by Engelbach, based solely on the "hormonic" signs of hypophysial disease, groups the disorders of this gland into three divisions, dependent on whether one or both of the lobes were involved: (1) anterior lobe disorders, in which this lobe alone was involved; (2) posterior lobe disorders, in which this lobe, without clinical evidence of anterior lobe dyscrasia, was affected; (3) bilobar disorders, in which abnormal function of both lobes could be demonstrated. Each lobar division is subdivided into the activities prevailing, the anterior and posterior lobe disorders into the states of: (*a*) hypoactivity and (*b*) hyperactivity; the bilobar group into the states of: (*a*) hypoactivity, (*b*) hyperactivity and (*c*) heteroactivity. The last named (heteroactivity) comprises mixed cases, in which there were opposite secretory states of the individual lobes, such as hyperactivity of the anterior lobe, combined with hypoactivity of the posterior lobe, and vice versa. These activities are redivided into: (1) pre-adolescent and (2) post-adolescent varieties, dependent on the age incidence of the abnormal secretory state. A final division is made of the age incidence, into: (*a*) a-neoplastic and (*b*) neoplastic varieties. Under the pre-adolescent hypoactivity of the anterior lobe is grouped Lorain-Levi type of pituitary insufficiency. In the postadolescent hypopituitarism of the anterior lobe, Engelbach has grouped those female cases which have had some osseous changes indicative of early anterior lobe disorder, and which developed, after age of maturity, amenorrhea, metrorrhagia, or dysmenorrhea, dissociated from any local or general disease, that reacted completely to substitution treatment of anterior lobe extracts. Under the hyperactivities of this lobe are described the clinical syndromes of gigantism and acromegaly.

Hypopituitarism.—Lissner reports the case of a child, aged 23 months, which was normal to the ninth month, when he began gaining rapidly in weight. The onset occurred with convulsions of the flexor type continuing up to within the month of death. The family history showed no glandular trouble or diabetes. The eyes showed edema of the retina; the throat was negative. There was marked muscular dystrophy with profound facial cyanosis, diminutive external genitals, doubling of weight in the third year of life, low sugar tolerance and antemortem temperature of 107.5 F. Treatment consisted of pituitary extract, whole gland, from 2 to 40 grains daily, without any benefit. Thyroid extract seemed to irritate. Roentgenoscopy of the skull showed a small sella turcica. A necropsy report and the histologic report on various glands are included.

Indiana State Medical Association Journal, Ft. Wayne

Oct. 15, 1920, **13**, No. 10

Transverse Incision in Pelvic Operations. M. L. Curtner, Vincennes. —p. 337.
Physician; Triumphs and Dangers of Specialism. F. B. Wynn, Indianapolis.—p. 338.
Abuse of Catharsis in Infants and Children. M. K. Miller, South Bend.—p. 343.

Iowa State Medical Society Journal, Des Moines

Oct. 15, 1920, **10**, No. 10

Relationship of Fractures to Malpractice Suits. C. M. Dutcher, Iowa City.—p. 331.
Etiology of and Prophylactic Inoculation in Influenza. E. C. Rosenow, Rochester, Minn.—p. 335.
Influenza. E. D. Allen, Hampton.—p. 337.
Radium. H. E. Meyer, Hampton.—p. 340.
Physician a Sociologist. P. W. Van Meter, Rockwell City.—p. 341.

Johns Hopkins Hospital Bulletin, Baltimore

October, 1920, **31**, No. 356

*Value of Wassermann Reaction in Obstetrics. J. W. Williams, Baltimore.—p. 335.
Cells of Arachnoid. L. H. Weed, Baltimore.—p. 343.
Occurrence of Congenital Atrioventricular Dissociation; Case of Congenital Complete Heart Block. E. P. Carter and J. Howland, Baltimore.—p. 351.
*One Factor in Mechanism of Hemolysis in Hemolytic Anemia. H. M. Clark and F. A. Evans, Baltimore.—p. 354.
*Coagulation Time of Citrated Plasma on Recalcination. H. C. Gram, Copenhagen.—p. 364.
Origin of Hemangiectases. T. S. Moise, New Haven, Conn.—p. 369.
Chemical Structure and Physiologic Action. H. H. Dale.—p. 373.

Value of Wassermann Reaction in Obstetrics.—The significance of the Wassermann reaction in pregnant women. In 4,000 women delivered during a given period 449, or 11.2 per cent., presented a positive reaction during pregnancy. Its incidence was much greater in black than in white women, being 16.29 and 2.48 per cent., respectively. In other words, a positive Wassermann reaction was noted in every sixth colored woman, as compared with every fortieth white woman. About one baby in 100 (forty-three out of 4,000) will have syphilis even when the maternal Wassermann is negative, and consequently one is not justified in claiming that the most ideal prenatal care can entirely eradicate the disease as a cause of fetal death. Turning to the consideration of the significance of the fetal Wassermann at the time of delivery,

a positive result was obtained in thirty-eight of the 4,000 observations, approximately 1 per cent. This means that only a small fraction of the children born of mothers with a positive Wassermann present such a reaction. It should, however, be remembered that macerated children are not available for the test, as their blood is already "laked." Williams concludes that the information obtained by the Wassermann made from the fetal blood at birth is not commensurate with the time consumed nor the money expended in such investigations. From the routine microscopic study of the placenta made by Williams for years, he is convinced that the syphilitic lesions occurring in it are extremely characteristic, and afford more conclusive evidence of the existence of syphilis than the demonstration of a positive maternal Wassermann, and, in general, tally fairly closely with the necropsy findings in the child. In Williams' opinion, the possibility of spermatic infection and the admissibility of Colles' law have not yet been conclusively proven or disproven, and consequenlty should be regarded as still sub judice.

Protective Power of Blood Serum.—From the results of tests made of the protective power of human serum against hemolysis of guinea-pig cells by sodium oleate, Clark and Evans conclude that the protective power of the serum of normal persons and of patients suffering from a wide range of diseases without anemia is remarkably constant in degree. In anemias of various types the protective power of the serum is diminished. This diminution is most marked in anemias which are hemolytic in character and in conditions in which the spleen is involved in the disease process. In pernicious anemia, the diminution of protective power of the serum is very striking, both in degree and the regularity with which it its found. The protective power of the serum in cases of pernicious anemia varies greatly, but seems to parallel more closely the general condition of the patient than the blood picture at the time the titration is done.

Determining Coagulation Time of Citrated Plasma.—A method is described by Gram by which the clotting time of citrated plasma may be determined at 35 C. in tubes placed in an unsilvered Dewar flask. The procedure is a modification of Howell's principle of optimal recalcination, and may be performed on the same blood specimen as that employed for the Oluf Thomsen method of counting the platelets. It is shown that the variations in clotting time of optimally recalcinated plasma correspond with those of venous blood. The coagulation time of uncentrifugalized plasma is longer than normal in the hemorrhagic diathesis with platelet deficit, pernicious anemia, leukemia and various other diseases. In hemophilia, the coagulation time is very much longer than normal, although a perfectly normal number of platelets is present. The method is of importance for the diagnosis of hemophilia if combined with a determination of the platelet count after Oluf Thomsen's method. It may also reveal the existence of a hemorrhagic diathesis in the course of diseases of the blood. If hemophilia can be excluded, a prolonger coagulation time means that there is a numeral, or partially functional, deficiency of platelets, though the converse need not be true.

Journal of Bacteriology, Baltimore

September, 1920, **5**, No. 5

Fate of Bacteria of Colon-Typhoid Group on Carbohydrate Mediums. O. Ishii, Pittsburgh, Pa.—p. 437.
"Color Standards" for Colorimetric Measurement of H-Ion Concentration *pH* 1.2 to *pH* 9.8. Leon S. Medalia, Boston.—p. 441.
Action of Eight Strains of Abortivo-Equinus on Certain Carbohydrates. C. P. Fitch and W. A. Billings, St. Paul.—p. 469.
Bacteriologic Peptone in Relation to Production of Diphtheria Toxin and Antitoxin. Lewis Davis, Detroit.—p. 477.
Nomenclature of Actinomycetaceae. R. S. Breed and H. J. Conn, Geneva, N. Y.—p. 489.
Use of Some Mixed Buffer Materials for Regulating H-Ion Concentrations of Culture Mediums and of Standard Buffer Solutions. M. R. Meacham, J. H. Hopfield and S. F. Acree, Syracuse, N. Y.—p. 491.
*Mutating, Mucoid Paratyphoidbacillus Isolated from the Urine of a Carrier. Th. Thjøtta and O. K. Eide, Christiania, Norway.—p. 501.
*Bacteriologic Studies in Chronic Arthritis and Chorea. J. H. Richards, New York.—p. 511.

Paratyphoid Bacillus.—The urine of a patient suffering from cystopyelitis suddenly showed numerous colonies of an atypical bacterium, while the typical paratyphoid colonies were much reduced in number. The new microbe turned out to be a capsule producing mucoid paratyphoid strain. It grew in large, very wet, slimy colonies with a reddish gray hue. The bacilli, were small, the motility slight or lost. The agglutinability was specific, but the reaction was very slow, the maximum reached in a far longer time than was the case with typical strains. The absorption of complement took place exactly in the same doses and in the same time as in tests with the typical strain. The microbe showed the same resistance against normal human serum as the typical strain. Likewise, white mice were killed by nearly the same doses of the two strains. The microbe satisfies all claims that are necessary to establish a real transmutation of bacteria.

Bacteriology of Chronic Arthritis and Chorea.—Blood cultures were taken by Richards in 104 cases of chronic arthritis in which syphilis and gonorrhea could be ruled out and *Streptococcus viridans* was found in fourteen cases. Complement fixation tests with *S. viridans* antigens were done in all cases. Joint cultures were attempted in forty-four cases and *S. viridans* was obtained in four cases. These cultures were taken during an acûte exacerbation, and an attempt was made to obtain fluid from the inflamed periarticular tissues as well as from the joint cavity. Streptococci were found in the feces by the Gram stain in forty-two cases, and were isolated and identified as *S. viridans* in five cases. Complement fixation with *S. viridans* antigen was found positive in sixty-eight cases. No foci of *S. viridans* infection were found in twenty cases, and of these twenty negative cases eleven gave positive complement fixation tests. In addition to these twenty cases, there were nine cases in which a streptococcus was seen in the Gram stain of the stool but it could not be obtained in culture for identification, and of these, seven gave positive complement fixation tests with *S. viridans* antigen. In four cases of chorea no focus of *S. viridans* infection was found. The complement fixation with *S. viridans* antigen was positive in thirteen cases and negative in three. The blood cultures showed *S. viridans* positive in five cases and negative in eleven cases. The feces cultures showed *S. viridans* in three cases, but Gram stain streptococci were found in nine cases. Other foci of *S. viridans* infection were found in the tonsils in nine cases; teeth, eight cases, and nose, five cases.

Journal of Experimental Medicine, Baltimore

Oct. 1, 1920, **32**, No. 4

*Chemotherapy Versus Serotherapy in Experimental Infection with Leptospira Icteroides. H. Noguchi, New York.—p. 381.
*Experimental Streptococcus Hemolyticus Pneumonia in Monkeys. F. G. Blake and R. L. Cecil, Washington, D. C.—p. 401.
*Local Autoinoculation of Sensitized Organism with Foreign Protein as Cause of Abnormal Reactions. J. Auer, New York.—p. 427.
*Experimental Syphilis in Rabbit. Affections of Skin and Appendages. W. H. Brown and L. Pearce, New York.—p. 445.
*Experimental Syphilis in Rabbit. Clinical Aspects of Cutaneous Syphilis. W. H. Brown and L. Pearce, New York.—p. 473.

Chemotherapy and Serotherapy of Leptospira Icteroides Infection. — Arsphenamin or neo-arsphenamin introduced intravenously into the body of the rabbit is present in some form in the blood serum drawn at the end of one hour. The substance present in such serum has a slowly operating injurious effect on *Leptospira icteroides*. The action of the drugs seems to be slower after passage through the animal body than before. If this phenomenon were to take place also in the infected body injected with these drugs, it is obvious that in a rapidly evolving infectious disease like yellow fever the progress of the infection will be too rapid to allow the drugs to exert their beneficial effect on the course of the disease. Anti-icteroides immune horse serum in a dose of 0.0001 c.c., or 1 c.c. of a 1 : 10,000 dilution, protected guinea-pigs from an infection with at least 5,000 minimum lethal doses of icteroides when injected simultaneously, but the same serum failed to exert any injurious effect on the organism when mixed in vitro in a concentration weaker than 1 : 2,000. A rapid disintegration resulted with a concentration of 1 : 20 and almost complete agglutination and degeneration in 1 : 200. The contrast between chemotherapy and serotherapy demonstrated with an immune serum is apparently of considerable practical significance.

Experimental Streptococcus Pneumonia. — *Streptococcus hemolyticus* can produce a primary pneumonia in monkeys

when injected intratracheally in sufficiently large amounts. It readily produces an extensive secondary pneumonia in monkeys when injected intratracheally in small amounts. Invasion of the lungs by *S. hemolyticus* in streptococcus pneumonia in monkeys is primarily by way of the interstitial framework of the lung and its lymphatics, and the disease does not appear to be primarily an infection of the terminal bronchioles. Although it seems probable to Blake and Cecil that invasion of the lungs by *S. hemolyticus* in streptococcus pneumonia in man may be by the same paths, they believe it is unsafe to draw this conclusion without qualification, since streptococcus pneumonia in man commonly occurs only as a secondary infection in the presence of a preceding inflammatory bronchitis.

Autoinoculation of Sensitized Organism.—While testing the sensitiveness of a number of dogs which had been treated with horse serum some years previously, and employing heavy doses of horse serum for the reinjections, Auer observed that a peculiar edema developed at the site of the operation wound in the inguinal region. In order to explain this peculiar type of edema, he assumed that the local reaction was anaphylactic. In these dogs a foreign protein (horse serum) was circulating, due to the reinjection, and therefore a certain amount of this protein ought to pass into the tissues adjoining the wound during the development of the ordinary wound edema which always follows an operation. Moreover, the amount of foreign protein acting locally would be increased by the oozing of blood, serum, plasma, and lymph into the wound from the severed blood and lymphatic capillary channels, all of which contain the antigen. As the dogs were sensitized to this foreign protein, the skin and adjoining tissues would also be sensitized and could respond by an anaphylactic reaction to this local autoinoculation of the horse serum. The experimental work done strongly supports this hypothesis. The details are given.

Experimental Syphilitic Skin Lesions.—From the study of a large series of rabbits with outspoken manifestations of generalized syphilis, lesions of the skin and appendages were found to constitute one of the largest and most varied groups of such affections. The conditions noted by Brown and Pearce consisted of alopecias, onychia and paronychia, and lesions of the skin proper. These lesions were divided into three classes: first, granulomatous lesions, second, infiltrations, and third, erythemas. The conditions described as cutaneous infiltrations included two general types of lesions, one a flattened and rather diffuse process, the other an elevated and sharply circumscribed papule. A third type of lesions resembling the macular erythemas of man was observed in a small number of animals, and while no definite proof of the specific origin of these lesions was obtained, the evidence available was strongly suggestive. In addition, several other cutaneous affections were noted which have not as yet been thoroughly investigated. It is suggested, however, that these processes may bear some relation to infection with *Spirochaeta pallida*.

Cutaneous Syphilis.—The cutaneous affection in the rabbit following local inoculation is a very characteristic one. The lesions themselves bear the marks of a varied but definite pathologic process identical in all respects with the reaction set up in the scrotum by local inoculation of *Spirochaeta pallida*. The character of the lesions and, withal, their great multiformity, the time relations existing between inoculation and the appearance of the cutaneous lesions, the occurrence of successive crops of eruptions, the relapsing course of the disease, and the preservation of a fixed order of distribution of the lesions, are highly suggestive of cutaneous syphilis in man, and it is believed that as more is known of the experimental infection and with better adaptation of organisms, the analogy will become even closer.

Journal of Medical Research, Boston

July-September, 1920, **42**, No. 1

*Behavior of Influenza Bacillus in Mixed Culture on Hemoglobin-Free Medium. J. J. Putnam and D. M. Gay.—p. 1.
Experimental Study of Mononuclear Phagocytes of Lung. H. H. Permar, Pittsburgh.—p. 9.
*Lack of Correlation Among Meningococci, Between Serologic Grouping and Lethal Effects on Rabbits. A. C. Evans, Washington, D. C. —p. 33.
*Congenital Aneurysm of Aortic Sinus of Valsalva. C. Goehring, Pittsburgh.—p. 49.
Life Cycle Changes of So-Called C. Hodgkini, and Their Relation to Mutation Changes in This Species. R. R. Melon, Rochester, N. Y. —p. 61.
*Compensatory Hypertrophy of Thyroid. V. Effect of Administration of Thyroid, Thymus Gland and Tethelin and Meat Diet on Hypertrophy of Thyroid in Guinea-Pigs. L. Loeb, St. Louis.—p. 77.
Removal of Particulate Matter from Pleura. H. T. Karsner and C. E. Swan-Beck, Cleveland.—p. 91.

Influenza Bacillus Dies in Mixed Culture.—A fairly representative group of strains of *B. influenzae* were inoculated by Putnam and Gay in mixed culture with *B. xerosis, B. diphtheriae, B. coli, M. pneumoniae,* and with staphylococci on a variety of blood-free mediums. The influenza bacillus not only failed to multiply under these conditions but the cultures died out after on or two days. On blood-free agar containing killed cultures of staphylococci and of *B. xerosis,* no growth of *B. influenzae* occurred.

Serology of Meningococci.—Judged by the time and manner of death, and by the lack of evidence of multiplication of meningococci within the body, Evans says, it would appear that death of rabbits saturated with meningococci was caused by disintegration of the organisms without multiplication or the elaboration of an exotoxin. Rabbits were protected against these poisons by previous injections of living meningococci without regard to agglutinin or tropin grouping. A strain of meningococcus, which had lost its power to produce tropins by long cultivation on agar, partially retained its power of immunizing rabbits against fatal doses of meningococci. These rabbits were shown to be protected without the presence of tropins in the serum.

Aneurysm of Aortic Sinus of Valsalva.—The case cited by Goehring was one of congenital aneurysm of the posterior aortic sinus of Valsalva with an anomaly of the aortic cusps. The aneurysm projected into the right auricle so as to produce a tricuspid insufficiency. This on admission was the chief clinical manifestation. Sudden progressive heart failure manifested by dyspnea, cyanosis, and the absence of the radial pulse, which lasted six hours (till time of death), was probably related to the rupture of the aneurysm. The aneurysm was entirely unassociated with an inflammatory process. Six cases of aneurysm of the sinus of Valsalva are recorded in the literature.

Effect of Feeding Thyroid, Thymus, Tethelin and Meat on Hypertrophied Thyroid.—In contradistinction to iodin, which does not inhibit compensatory hypertrophy of the thyroid gland in the guinea-pig, Loeb says feeding with thyroid tablets has a very marked inhibiting effect. This effect is a direct and specific one and it is not indirect effect, called forth by the loss of weight which is induced through thyroid feeding. Iodin preparations given simultaneously with thyroid tablets do not counteract the effect of thyroid. Feeding with thymus does not prevent thyroid hypertrophy. It is, however, possible that it diminishes the intensity and frequency of thyroid hypertrophy, although at present this cannot be stated definitely considering the variable factors which enter into the development of thyroid hypertrophy. Repeated injections of tethelin do not noticeably influence the degree of thyroid hypertrophy which follows extirpation of the greater part of the thyroid. A diet consisting principally, but not exclusively, of meat, given to guinea-pigs for three and one-half weeks, does not produce hypertrophic changes in the thyroid; such a meat diet does neither prevent nor noticeably increase compensatory hypertrophy of the thyroid in the guinea-pig.

Kansas Medical Society Journal, Topeka

October, 1920, **20**, No. 10

Duties of Full-Time Health Officer. E. G. Brown, Topeka.—p. 285.
Small Hospital. T. A. Jones, Hutchinson.—p. 289.
Case of Primary Carcinoma of Liver with Cirrhosis H. A. Gestring, Kansas City.—p. 293.
Surgical Treatment of Empyema. J. E. Wattenberg, Ithaca, N. Y. —p. 297.

Maine Medical Association Journal, Portland

October, 1920, **11**, No. 3

Congenital Pyloric Stenosis. F. H. Jackson, Houlton.—p. 89.

New York Medical Journal

Oct. 30, 1920, **112**, No. 18

Series of Foreign Bodies in Bronchi and Esophagus. H. L. Lynah, New York.—p. 653.
Acute Infections of Hand and Their Surgical Treatment. W. T. Coughlin, St. Louis.—p. 665.
Knife Cautery in Surgery of Thorax. J. F. Van Paign, Chicago. —p. 673.
Case of Carcinoma of Middle Ear. J. Guttman, New York.—p. 675.
Congenital Underdevelopment of Right Side in an Infant Three Months Old. B. K. Rachford, Cincinnati.—p. 677.
Recent Increases in Venereal Diseases. T. E. Satterworth, New York.—p. 678.
Instrument for Simplifying Tonsillectomy by Snare. I. F. Shapiro, New York.—p. 681.

Northwest Medicine, Seattle

October, 1920, **29**, No. 10

*Therapeutics of Thick Cereals in Disorders of Infancy. J. I. Durand, Seattle.—p. 249.
Pyloric Stenosis in Infants. E. H. Smith, Ogden, Utah.—p. 252.
Breast and Artificial Feeding. P. D. McCornack, Spokane.—p. 255.
Care of Baby. J. J. Tilton, Spokane.—p. 257.
Method for Prevention of Colic in Nursing Infant E. H. Current, Spokane.—p. 259.
*Excessive Hyperpyrexia in an Infant with Cerebrospinal Meningitis. J. B. Manning, Seattle.—p. 260.
Cases of Unknown Etiology and Diagnosis. J. B. Bildberback, Portland, Ore.—p. 263.
Routine Wassermann Test. J. G. Strohm, Portland, Ore.—p. 265.
Arsphenamin Mercury Intravenously. J. C. Klecan, Portland, Ore. —p. 266.

Thick Cereals in Disorders in Infancy.—Durand's experience with fifty cases has convinced him that the feeding of thick cereal mixtures with 10 per cent. and even 15 per cent. of starch is safe and often a most valuable therapeutic measure. In most cases he used Sauer's formula (farina, 2 tablespoonfuls; dextrimaltose, 2 tablespoonfuls; skimmed milk, 6 ounces; water, 8 ounces). The results have been satisfactory, especially in eleven cases of pyloric obstruction. Thick cereal mixtures are also of service in neurotic vomiting, certain types of malnutrition and particularly valuable to supplement breast feedings. The cereal mixtures, because of their action in allaying excessive peristalsis, are the most effective remedy for the treatment of colic in infancy.

Excessive Hyperpyrexia in Cerebrospinal Meningitis.—In the case cited by Manning the temperature by rectum registered 109 F. by three different thermometers. A lumbar puncture was done and a few drops of a turbid spinal fluid were obtained. Fifteen c.c. of Flexner's serum was given. Four hours later the temperature was 103.4 F. The baby recovered.

Oklahoma State Medical Ass'n Journal, Muskogee

October, 1920, **13**, No. 10

Diagnosis and Treatment of Cerebrospinal Syphilis. R. Bolend, Oklahoma City.—p. 353.
Pathology of Spinal Fluid in Cerebrospinal Syphilis. R. S. Campbell, Guthrie.—p. 357.
Obstructions at Bladder Neck. J. R. Caulk, St. Louis.—p. 367.

Pennsylvania Medical Journal, Harrisburg

October, 1920, **24**, No. 1

Epidemic (Lethargic) Encephalitis. M. H. Weinberg, Pittsburgh. —p. 4.
The "Ancient" and the "Modern" Kidney. J. H. Comroe, York.—p. 8.
Centenary of Florence Nightingale. J. Walsh, Philadelphia.—p. 13.
Remedies Applied from Outside as Important as Those Applied from Inside. J. M. Taylor, Philadelphia.—p. 16.

South Carolina Medical Association Journal, Greenville

October, 1920, **16**, No. 10

Goiter. S. O. Black, Spartanburg.—p. 242.
Malignant Tumors of Male Breast; Report of Case. G. Benet, Columbia.—p. 245.
Acute Conditions of Upper Abdomen. W. B. Sparkman, Greenville. —p. 249.

Texas State Journal of Medicine, Fort Worth

October, 1920, **16**, No. 6

Go On and Forget It. J. J. Terrill and G. F. Witt, Dallas.—p. 234.
Mental Crutches. J. A. McIntosh, San Antonio.—p 237.
Significance of Vertigo, Nystagmus and Past Pointing in Intracranial Diseases. J. Greenwood, Houston.—p. 239.
Vertigo. H. T. Aynesworth, Waco.—p. 243.
Surgical Aspects of Epilepsy. R. W. Noble, Temple.—p. 246.
Hydrophobia. M. A. Wood, Houston.—p. 247.
Myotonia; Report of Case M. M. Morrison, Denison.—p. 249.
Radical Excision and Sterilization of Certain Local and Glandular Infections. A. C. Scott, Temple.—p. 250.
*Treatment of Bubonic Plague. Analysis of Beaumont and Galveston Cases. M. D. Levy, Galveston.—p. 257.

Bubonic Plague in Texas.—Twenty-six cases of bubonic plague have occurred in Texas, with fifteen deaths, in eight of which no serum at all was received. Of the remaining seven patients, one died with anaphylactic symptoms, one after receiving a negligible amount of serum (35 c.c.) and two were apparently hopeless when seen. This leaves four cases in which serum was apparently without effect, as against eleven cases in which recovery was noted. These findings Levy says completely substantiate Seeman's earlier investigations as to the efficacy of antiplague serum when administered in large doses.

Virginia Medical Monthly, Richmond

October, 1920, **47**, No. 7

Importance of Musculofascial Plane in Rectovaginal Septum. J. W. Henson, Richmond.—p. 283.
Intussusception; Importance of Early Diagnosis. W. P. McDowell, Norfolk.—p. 288.
Hospital and Doctor of Today in Relation to Medicine of Present and Future. H. A. Christian, Boston.—p. 293.
Plea for Cesarean Section with Better Obstetrics. S. B. Moore, Alexandria.—p. 299.
Some Disturbances of Pituitary Gland. F. H. Redwood, Norfolk. —p. 301.
*Neglected Method of Treatment for Ulcerative Cystitis in Female. A. P. Jones, Roanoke.—p. 304.
Case of Eventration of Diaphragm. W. Allan, Charlotte, N. C. —p. 305.
Analysis of Anatomic Diagnoses of 699 Autopsies of Patients Dying of Tuberculosis. W. B. Blanton, Richmond.—p. 307.
Complete Abruptio Placentae in Twenty-Ninth Week of Pregnancy; Manual Delivery; Recovery. V. Harrison, Richmond.—p. 309.
Complete Circumcision in Chancroid Beneath Tight Prepuce and Multiple Chancroids on Prepuce. S. Newman, Danville.—p. 311.
Cesarean Section. M. J. Payne, Staunton.—p. 312.
"Dr. Geo. Ross, Our Patriarch." T. H. Hancock, Atlanta, Ga.—p. 315.
Case of Mastoiditis, with Necrosis of Bony Lamina Covering Sigmoid Portion of Lateral Sinus. T. W. Edmunds and G. B. Dudley, Jr., Danville.—p. 317.
Three Cases of Pneumonia in Which Pneumococcic Antigen Was Used. R. E. Mitchell, Richmond.—p. 317.
Case of Fracture of Pelvis with Necropsy Findings. N. F. Rodman, Norfolk.—p. 318.

Treatment of Ulcerative Cystitis in Female.—Continuous irrigation of the female bladder with sterile water by means of a two-way catheter Jones says is a simple and harmless procedure and is of great value in certain cases of severe ulcerative cystitis.

Wisconsin Medical Journal, Milwaukee

October, 1920, **19**, No. 5

Motherhood Among Ancients. H. M. Brown, Milwaukee.—p. 216.
Renal Infections. W. G. Sexton, Marshfield.—p. 226.
*Administration of Large Doses of Digitalis in Cardiac Disease L. M. Warfield, Milwaukee.—p. 235.
Anesthesia and Analgesia in Management of Dystocia. C. H. Davis, Milwaukee.—p. 242.
Doctor Who Was Willing to Go Into Service but Could Not Leave. J. M. Dodd, Ashland.—p. 246.

Digitalis in Heart Disease.—From a safe therapeutic standpoint it is suggested by Warfield that the method of Eggleston and that of Robinson be combined. To produce the best result, the dose of digitalis should produce slight nausea. The problem is to bring the patient to this stage at the earliest possible moment, then stop the digitalis. The procedure would be to calculate the maximal dose on the basis of 0.1 c.c. of tincture per pound of patient. Give a single dose from 10 to 20 c.c. If this produces nausea, that is the dose and no more is to be given. If no symptoms are produced, then give one-half the initial dose in six hours, a fraction of this (about one-half) in another six hours, and a fourth dose of the same amount as the third dose in six hours should no nausea be produced and no change in pulse be noted. This would correspond to 0.15 c.c. per pound, as Eggleston recommends. Great care and judgment must be used if the patient has had any digitalis for ten days previously. Minimum doses might be disregarded. Warfield urges caution in the administration of the large doses. Especially

important is the accurate knowledge of the character of the cardiac arrhythmia. He most emphatically urges doses of from 2 to 4 c.c., repeated at four hour intervals, until physiologic action begins. Then stop the digitalis. The action persists for days so that no more is needed once the tolerance has been reached. After a week or ten days one may then use the tonic doses, from 1 to 2 c.c., once or twice daily, for weeks. Patients have been known to take digitalis off and on for years. Often as small a dose as 10 minims, once a day, seems to keep them free from distressing symptoms.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

Bristol Medico-Chirurgical Journal

September, 1920, **37**, No. 140

Famine Dropsy as a Food Deficiency Disease. J. A. Nixon.—p. 137.
Vesical Calculus in a Urinary Typhoid Carrier. D. Wood.—p. 148.
Poisoning by "Mustard" Gas. E. H. E. Stock and R. Rolfe.—p. 151.

British Journal of Children's Diseases, London

July-September, 1920, **17**, Nos. 199-201

*Case of Antenatal Intestinal Obstruction; Other Forms of Intestinal Obstruction in Infants. S. A. Owen and N. Lake.—p. 115.
*Hereditary Syphilitic Aortitis. E. J. Stolkind.—p. 126.
*Case of Suprarenal Sarcoma of Robert Hutchison Type. F. P. Weber.—p. 133.
*Stigmata of Predisposition to Bone and Joint Tuberculosis. W. C. Rivers.—p. 140.

Antenatal Intestinal Obstruction.—In the case cited by Owen and Lake the child at birth had marked abdominal distention, but otherwise appeared to be normal. On the following day the child vomited a greenish fluid, and the bowels expelled a plug of mucus. There was visible peristalsis, and distended coils of intestine could be felt. There was no evidence of free fluid in the abdomen. Heart and lungs were normal. The child passed urine naturally. No enlargement of liver or spleen could be detected. On rectal examination the anal canal and rectum were empty and the intestine appeared to end blindly at the limit of reach of the little finger. A diagnosis of intestinal obstruction, due probably to atresia of the colon, was made and an operation was performed. The obstruction was about one foot above the ileocecal valve and due to a band arising from the mesentery and descending to the upper surface of the bladder, where it appeared to blend with the urachus and so passed up to the umbilicus. There was little doubt that it was the remains of the vitelline artery of the embryonic circulation coming as a branch from the superior mesenteric. There was no diverticulum of the bowel. On dividing the band the underlying portion of the bowel was found to have a linear band of gangrene, with mucosa exposed. This was oversewn. The most distended coil of small intestine was punctured and a large quantity of gas and meconium liberated. The puncture was oversewn. The abdomen was closed without drainage with through and through fishing-gut sutures. The child stood the operation well, but a few hours later fecal vomiting set in and continued up to the time of death, which occurred on the day following the operation.

Hereditary Syphilitic Aortitis.—Stolkind has not been able to find in the literature a single case of proved hereditary syphilitic aortitis in older children, and especially in adolescents and adults.

Sarcoma of Suprarenal.—The case cited by Weber is one of primary malignant disease of the medullary portion of the suprarenal gland in a child, aged 5 years, with secondary, multiple, diffuse, more or less symmetrical metastases in the cranium—of the type of which Robert Hutchison, in 1907, collected ten examples. A remarkable feature of the case was the enormous, nearly uniform, enlargement of the whole liver, which during life not only completely masked and concealed the presence of the suprarenal tumor, but also, when considered in association with the history of the medicinal use of brandy, gave rise at one time to the suspicion of alcoholic hypertrophic cirrhosis. It was suggested that the child's blindness might be due to the brandy having been adulterated with methyl alcohol. But this suggestion was found to be wrong, when the remainder of the brandy which had been used was produced.

Stigmas of Predisposition to Bone and Joint Tuberculosis.—Rivers found that in cases of bone and joint tuberculosis red and reddish hair is nearly twice as frequent as in the ordinary population. As to the situation of the tuberculous lesion, perhaps in the red haired the spine was rarely attacked. Hardly more of them than of the others had multiple lesions of tubercle. Permanent freckling was a little commoner in bone and joint tubercle than is normal. The percentage of ichthyosis was 1.6. It is at least twice as frequent in bone and joint tubercle as in nontuberculous children.

British Medical Journal, London

Oct. 16, 1920, No. 3120

Atrophy of Liver. J. Miller and A. Rutherford.—p. 581.
Liberation of Energy During Interaction of Hypochlorous Acid and Living and Dead Organic Matter. G. S. Woodhead.—p. 586.
*Case of Osteomalacia Treated by Oophorectomy. J. B. Hellier.—p. 587.
*Blood Pressure in Exophthalmic Goiter. J. S. Goodall and L. Rogers.—p. 588.
Intratracheal Anesthesia by Nasal Route for Operations on Mouth and Lips. S. Rowbotham.—p. 599.
*Case of Cerebellar Tumor. R. T. Williamson.—p. 591.
Influenza in India, 1918-1920. H. G. Waters.—p. 591.

Oophorectomy in Osteomalacia.—About three years after the onset of the disease in a secundipara, aged 38, Hellier removed the ovaries. Twelve months later the patient seemed very much better in all respects.

Blood Pressure in Exophthalmic Goiter.—In ten cases occurring in women between the ages of 23 and 48, the blood pressure was below the physiologic value. The fall varied between 4 and 50 mm. The disease was well established and the histories showed that the onset had been gradual. The diastolic pressure remained approximately normal, and the pulse pressure consequently was low. The systolic blood pressure passes through three phases: (1) a short stage of primary hypertension; (2) a prolonged stage of hypertension, and (3) a stage of secondary hypertension. After operation on the thyroid, the systolic blood pressure tends to rise. This rise is not infrequently associated with cardiac acceleration and an irregularity of the pulse due to auricular fibrillation, and possibly in extreme cases followed by ventricular fibrillation resulting in death. A low systolic blood pressure, other factors being equal, indicates from an operation point of view: (1) little myocardial exhaustion; (2) a small postoperative rise in blood pressure, and consequently little liability to postoperative cardiac failure; (3) less hemorrhage. Diurnal variations in blood pressure are considerable, being relatively greater than in health.

Cerebellar Tumor.—The symptoms manifested by Williamson's patient were: severe headache; double optic neuritis; internal strabismus of the left eye; paralysis of the left external rectus muscle; diplopia; ataxic gait; definite tendency to fall backward and to the left when walking—the last symptom at the end of the illness was very well marked; also when standing or sitting the head was tilted or rotated so that the chin was directed or approximated, to the right shoulder. The necropsy revealed a cerebellar tumor. It was situated at the posterior part of the cerebellum, just under the tentorium. It affected the posterior half of the middle lobe (or vermis) and extended to the left lobe, affecting almost the whole of the posterior half of this lofe, but it only affected a very small portion of the right lobe, quite close to the middle lobe. The growth extended both to the upper and lower surfaces of the posterior half of the left lobe of the cerebellum, but it was most extensive in the central or middle portion of this lobe. The dentate nucleus was seen outside the growth on the right side. The growth occupied the position of this nucleus on the left side and the position of the roof nuclei in the middle lobe. The growth was a plexiform angiosarcoma, the cells being chiefly spindle cells.

Dublin Journal of Medical Science

October, 1920, **4**, No. 8

Two Mediastinal Tumor Cases. J. Spears.—p. 361.
Elbows Ankylosed and Flail. R. A. Stoney.—p. 367.

Glasgow Medical Journal

October, 1920, **12**, No. 4

*Undescribed Condition (Parathyroid Deficiency) of Infancy and Its Treatment. G. H. Clark.—p. 193.
Plea for Early Recognition of Syphilis. W. H. Brown.—p. 203.
Case of Ischemic Contracture of Forearm, Occurring After Fracture of Both Bones; Treated by Manipulation and Splinting A. Young.—p. 215.
Bergonie Chair: Apparatus for Producing Painless Alternating, Interrupted Electrical Current. W. F. Somerville.—p. 225.

Paratyphoid Deficiency.—The outstanding symptoms of the condition noted by Clark in two cases were: (1) idiocy; (2) depression; (3) fibrillary twitchings in the muscles; (4) jerking movements of the limbs; (5) convulsions, and (6) inability to balance. Clark fed these children parathyroid. Improvement began almost at once. After about three weeks the fits and twitching had ceased entirely and they never returned.

Journal of Neurology and Psychopathology, London

August, 1920, **1**, No. 2

*Histopathology of Carbon Monoxid Poisoning. R. M. Stewart.—p. 105.
Some Factors in Psychotherapy. W. Brown.—p. 117.
Ataxia, Asaphia and Apraxia in Speech. E. W. Scripture.—p. 124.
*Acute Confusional States in Psychoneuroses. W. Johnson.—p. 131.
Nature of Insomnia in Psychoneuroses. R. G. Gordon.—p. 142.
*Case of Torsion Dystonia, or Torsion Spasm. M. A. Blandy.—p. 148.
Epilepsy. W. A. Turner.—p. 156.

Histopathology of Carbon Monoxid Poisoning.—The histologic appearances described by Stewart confirm the observation that in fatal cases of gas poisoning the brunt of the damage to the tissues falls on the central nervous system. The evidence is in favor of the view that carbon monoxid exerts its influence in two ways: (1) indirectly, by altering the coagulative power of the blood, and diminishing the oxygen supply to the tissues; and (2) directly, by a specific action on the parenchymatous elements of the nervous system.

Acute Confusional States in Psychoneuroses.—The classification used by Johnson lays stress on a fairly distinct grouping which was observed. The cases appeared to group themselves into three fairly distinct types: (1) simple type with short confusional period; (2) severe type with pronounced, but temporary, state of confusion; (3) type associated with definite mental disorder. The majority of cases fell into Group 1. Johnson says that it is only by an appreciation of the fact that many cases—which are now being treated for vague subjective symptoms, mild forms of mental incapacity, etc.—have undergone definite periods of confusion in the early stage of their disorder, that proper prognosis and treatment become possible.

Torsion Dystonia or Spasm.—To the forty cases of this disease on record, most of which have been reported either in Germany or in America, Blandy adds one, the first of this curious condition to be observed in England. The patient was 8 years old. The onset of the trouble was six months after an attack of diphtheria.

Journal of Tropical Medicine and Hygiene, London

Oct. 1, 1920, **23**, No. 19

*Attempt to Explain Greater Pathogenicity of Plasmodium Falciparum as Compared with Other Species. C. C. Bass, New Orleans.—p. 237.
Leprosy at Rodrigues. E. Mangenie.—p. 238.

Pathogenicity of Plasmodium Falciparum.—The theoretical explanation offered by Bass for the greater pathogenicity of *P. falciparum* is that the shape of the parasite and the unyielding consistency of the substance of which it is composed result in parasites lodging in capillaries to a greater extent and there multiplying in larger numbers, more of which survive, than occurs in the other species. The ameboid activity is greater and the cytoplasm is less resistant to pressure in the other species, which is unfavorable to their lodging in capillaries, causing more of the segmentation to take place in the circulation where the merozoites produced are promptly destroyed. This theoretical explanation is based largely on the observation that artificially cultivated falciparum parasites are more resistant to pressure, that they have little or no ameboid motion in contrast with the other species and on the finding at necropsy of much larger numbers of capillaries obstructed by falciparum parasites.

Journal of State Medicine, London

October, 1920, **28**, No. 10

Harben Lectures, 1920. I. Antigens and Antibodies. M. Nicolle.—p. 293.
Incidence of Notifiable Infectious Diseases During 1919.—p. 305.
Carbon Monoxid Poisoning from Use of Petrol Engines. Experiences During War. D. D. Logan.—p. 306.

Medical Journal of South Africa, Johannesburg

August, 1920, **16**, No. 1

Anatomy, Physiology of Human Heart. W. E. Burrows.—p. 2.
Duration of Human Life in Different Parts of South Africa. C. Pijper.—p. 6.

Archives de Médecine des Enfants, Paris

October, 1920, **23**, No. 10

Retention of Breast Milk. C. Porcher.—p. 569. Cont'd.
Share of Physician in Infant Welfare Work. P. Rohmer.—p. 593.
Congenital Paroxysmal Cyanosis. G. Variot and P. Lantuéjoul.—p. 599.
Case of "Electric Chorea." C. Achard and L. Ramond.—p. 603.
*Congenital Malaria. A. Cuadra (Nicaragua).—p. 606.
Reestablishment and Development of Breast Milk. J. Comby.—p. 608.

Congenital Malaria.—The young mother had a history of malarial antecedents in Cuadra's case, and two days after the birth of the child she had a typical chill and fever. The temperature of the child ran up at the same time to 104 F. and *Plasmodium vivax* was cultivated from the blood of both mother and child. Under quinin preparations the temperature returned permanently to normal in both.

Bulletin Médical, Paris

Sept. 4, 1920, **34**, No. 43

Practical Urology. R. Le Fur.—p. 791. Cont'd.

Sept. 11, 1920, **34**, No. 44

Neurasthenia and Nosomania. P. Gallois.—p. 812.
*Acute Frontal Sinusitis and Ptosis. G. Liébault.—p. 815.

Ptosis with Frontal Sinusitis.—Liébault reports three cases of sinusitis as a sequel of influenza. It was accompanied by ptosis on the side affected, but the lumbar puncture fluid showed merely slight overpressure. Under medical measures to disinfect and reduce congestion in the nose, the acute phase soon subsided to complete healing in one case and to the previous chronic stage in the others. Surgical intervention during the acute phase would probably have whipped up the process and entailed sepsis.

Sept. 18, 1920, **34**, No. 45

*Mixed Lung and Joint Tuberculosis. A. Jacquemin.—p. 835.
Tertiary Syphilitic Ulnar Paralysis. P. Roblin.—p. 838.

Associated Lung and Joint Tuberculosis.—Jacquemin is physician at a hospital to which are sent mixed cases of tuberculosis of both lungs and joints. He discovered that the prognosis depends on which process began first, as the second process acts like a derivation or a fixation abscess, diverting the disease to this second point. When this second process occurs in the lungs, these vital organs soon become compromised, but when the process of derivation is on a limb, it does comparatively little harm, and this second process should be encouraged rather than suppressed. Hence the prognosis is comparatively favorable when the bone or joint process had developed secondarily to the pulmonary process. He cites a number of instances of each type, and also some cases to show the disastrous results when a secondary bone or joint process was operated on and cured, thus depriving the primary lung process of this outlet. On the other hand, benefit resulted when a primary bone or joint process was operated on and cured, the necessity for the lung's sacrificing itself thus being done away with.

Bulletins de la Société Médicale des Hôpitaux, Paris

July 30, 1920, 44, No. 28

Pluriglandular Syndrome. Crouzon and Bouttier.—p. 1114.
Oxycephaly and Dwarf Growth. A. Isola and others.—p. 1122.
*Cough of Stomach Origin. G. Hayem.—p. 1129.
*Sacralization of Lumbar Vertebra. P. Merklen and others.—pp. 1135 and 1138.
Lesions in Spinal Cord with Cerebellar Ataxia, Friedreich's Disease and Spastic Paraplegia. C. Foix and Trétiakoff.—p. 1140.
*Albumin in Spinal Fluid with Psychoses. P. Ravaut and Laignel-Lavastine.—p. 1151.

*Primary Adenitis of Herpes Zoster. L. Ramond and R. Lebel.—p. 1157.
Recurring Paraplegia with Aorta Disease. C. Achard and others.—p. 1163.
Chronic Trophedema and Spina Bifida. A. Léri and Engelhard.—p. 1169.
Duodenal Tube for Serial Study of Stomach Content. P. LeNoir and M. Delort.—p. 1174.
Treatment of Typhoid Fever with Emulsion of Saprophyte Derived from Water (Mauté). A. Florand and P. Nicaud.—p. 1176.
*Polycystic Pancreas. A. S. Alivisatos.—p. 1181.
Liver Angioma Simulating Gastric Cancer. Alivisatos.—p. 1191.
Interpretation of Orthodiagram of the Heart. C. Lian.—p. 1197.

Cough of Stomach Origin.—Hayem's patient was a man of 53 who for twenty-five years had had vague dyspeptic disturbances for which he had taken pounds of sodium bicarbonate and other drugs in the course of the years. During the last six years he had been tormented with a cough and spitting of thick mucus from the stomach. Under treatment of the dyspepsia by lavage of the stomach and dieting, the cough disappeared. Hayem reiterates the necessity for seeking latent stomach disease with a puzzling cough, and also the necessity with chronic gastritis to restrict to two meals a day, with a nine hour interval, and kéfir as the only drink at first.

Blunders in Differential Diagnosis of Pains from Deformity of Lumbar Vertebra.—Richards found "sacralization" of the fifth lumbar vertebra responsible for lumbar pains in 90 per cent. of sixty cases. In Merklen's case the pain came on suddenly, the man unable to stand. He had had two severe attacks of these lumbar crises, lasting a month and then two weeks. The pains spread to the umbilicus and inguinal regions and to the inside of the thigh. The only effectual treatment is to resect the enlarged vertebra which is pressing on nerves and other tissues.

Variations in Albumin Content of Spinal Fluid in Psychoses.—Ravaut and Lavastine found an exceptionally high albumin content of the spinal fluid during the height of a psychosis. The details of forty-seven cases are tabulated. Systematic investigation of the lumbar puncture fluid might reveal an organic origin for many conditions which we now regard as purely functional.

The Primary Adenitis of Herpes Zoster.—Ramond and Lebel say that the primary adenitis is probably the direct work of the still unknown virus causing the herpes zoster. It can be detected every time by palpation, and thus serves to differentiate true herpes zoster.

Polycystic Pancreas.—The complete details are given of a case of polycystic degeneration of the pancreas in a previously healthy woman of 25, with rupture into the abdominal cavity and penetration of the fluid into the right pleural cavity. There never had been any sugar in the urine or polyuria.

Lyon Médical

Sept. 25, 1920, **129**, No. 18

Sodium Cacodylate in Skin Disease. L. M. Bonnet and Morénas.—p. 771.
*The Wrist Sign of Tuberculosis. T. Astériades.—p. 774.

The Wrist Sign of Tuberculosis.—Astériades refers to a small synovial cyst in the wrist, usually on the dorsal surface of the radiocarpal articulation and causing no disturbance. These minute cysts have been explained in various ways, but had always been regarded as insignificant and harmless until Tixier noted that persons with a cyst of the kind almost invariably developed tuberculosis sooner or later, some joint process or pulmonary lesion. Sometimes the cyst developed in the course of tuberculosis, and then it was an index of the gravity of the disease. In the six cases of which he knows, including two personal cases, all were in women. In one consumptive, the cyst disappeared after she became pregnant.

Paris Médical

Sept. 11, 1920, **10**, No. 37

*Biologic Tests of Endocrine Imbalance. H. Claude and others.—p. 197.
*Exploratory Puncture of Normal Peritoneum. A. Carniol.—p. 202.

Biologic Tests of Endocrine Functioning.—Claude, Bernard and Piédelièvre have been studying for several years the response in different persons to intramuscular injection of from 0.05 to 0.15 gm. of extract of the posterior lobe of the pituitary or of from 1 to 5 c.c. of the 1:1,000 solution of epinephrin. The pituitary injection may induce pallor and contractions of the bowel and uterus, and the epinephrin injection tremor or palpitations, but the reactions to be noted in the tests are (1) the cardiovascular response: the pulse, and maximal and minimal blood pressure, noted at five minute intervals, for an hour or hour and a half after the injection; (2) the sugar content of the urine when the injection had been immediately preceded by a test meal comprising 100 gm. of bread, 150 gm. of milk, 50 gm. of sugar or 150 gm. of glucose. The sugar output for six or nine hours thereafter is measured; (3) changes in the blood count. The corpuscles are counted anew one and three hours after the injection. The findings with these tests in different cases of endocrine upset are compared, and the possible differential value is emphasized as interpretation of the findings becomes more reliable. Their results with treatment based on what has been already learned are encouraging. With ovarian insufficiency, the pulse increased by ten or twenty beats under pituitary treatment but there was no glycosuria. The reactions to epinephrin were the same as in the normal, that is, no change in the pulse or merely a slight and tardy acceleration, a distinct rise in the systolic pressure, and a constant glycosuria. The normal response to the pituitary test is a drop in the systolic pressure with slight if any change in the pulse or sugar content of the urine. With hyperactivity of the thyroid, the reactions are the same as in the normal, except that they are all much exaggerated. Hence exaggerated normal responses point to the thyroid. They urge the accumulation of data in this line, especially in diabetes and epilepsy.

Exploratory Peritoneocentesis.—Carniol refers to obtaining normal fluid from the peritoneal cavity to seek for possible evidences in the fluid of action on the peritoneum from an incipient pathologic condition in a viscus. The point found most accessible and convenient for the puncture is in the iliac fossa on a horizontal line passing from the anterior superior iliac spine to 2 or 3 cm. inside this spine, the patient reclining, the pelvis slightly raised, and slightly turned toward that side. The fluid may be aspirated or may be drawn up by mere capillary attraction, or be soaked into cotton wound on the tip of the needle, or 10 or 20 c.c. of physiologic solution may be injected and a few drops aspirated at once. Lymphocytosis in the fluid may suggest a tuberculous origin for symptoms elsewhere, confirmed by the course of the cases. One case was diagnosed as chronic malaria, although the blood was sterile, until the discovery in the woman of 35 of a tender point in the right iliac fossa, and peritoneocentesis showed polynucleosis with a few lymphocytes. The operation confirmed the assumption of chronic appendicitis. In another case the normal fluid turned the scale in favor of an ovarian cyst instead of salpingitis. In some cases of syphilis and in tuberculous infants, the peritoneal fluid presented the same lymphocytosis as in the spinal and pleural fluid.

Presse Médicale, Paris

Sept. 15, 1920, **28**, No. 66

*Pathologic Physiology of Jacksonian Epilepsy. R. Leriche.—p. 645.
*Plurality of Syphilis Virus. C. Levaditi and A. Marie.—p. 646.

Jacksonian Epilepsy.—Leriche has witnessed the development of an attack of jacksonian epilepsy while he was examining the brain, and he was impressed by the sudden spasm of the cerebral arteries, inducing immediate and pronounced anemia of the cortex. He found the cerebrospinal fluid under subnormal pressure in the men with jacksonian epilepsy following a war wound. The humeral artery on the side affected was also abnormally dilated in these cases, and ligation of this artery had a favorable influence on the morbid peripheral sensations. These facts suggest that sympathectomy might favorably modify the circulation in the brain in cases of jacksonian epilepsy. They suggest further the possible advantage of injection of small amounts of artificial serum, about 150 c.c. on alternate days, to maintain the proper pressure in the cerebrospinal fluid. It is likewise possible that systematic ligation of the humeral artery might aid in warding off the attacks; some of the men found out for themselves that wearing a constricting band around the arm and tightening it when symptoms develop, would often abort the jacksonian spasm.

Plurality of Syphilitic Virus.—Levaditi and Marie here reiterate their assertions in regard to the nonunity of the spirochetes responsible for syphilis. The neurotropic type differs from the skin and mucous membrane type. Rabbits inoculated with one are not protected against the other, and the course of their infection differs notably according to the type inoculated. "Just as we have typhoid and paratyphoid bacilli, we must assume a syphilis and a parasyphilis virus." They point to the instances on record in which all the men contaminated at the same source developed exclusively one or the other type of syphilis. In this communication they reply to criticisms of this view, but Sicard comments on their statements that it is absolutely rash, at the present stage of our knowledge, to apply to syphilis in man conclusions drawn from syphilis in rabbits.

Sept. 18, 1920, **28**, No. 67

*The Non-Urea Nitrogen in Uremia. H. Chabanier and A. de Castro Galhardo.—p. 653.
*Articular Pneumoserosa. J. Terracol and L. J. Colanéri.—p. 655.
Rôle of Proteins of Food in Etiology of Headache. R. C. Brown (U. S. A.).—p. 656.

Share of Non-Urea Nitrogen in Uremic Symptoms.—Chabanier and de Castro present evidence from fifty cases that the urea content of the blood may be high without this inducing appreciable symptoms. But let some intercurrent disease, general anesthesia or trauma intervene, or the urea content surpass 5 or 6 gm. then the unstable nitrogen metabolism becomes upset, and there is retention of residual nitrogen, and this is of a very grave prognosis. The urea content of the blood may keep at 5 or 6 gm. without much harm, but once this level is surpassed, the nitrogen metabolism becomes speedily compromised. This may occur with even normal urea content of the blood, explaining the cases in which grave uremia develops without any disturbance in kidney secretion.

Pneumoserosa.—Terracol and Colanéri expatiate on the instructive findings when air is injected into a joint for roentgenoscopy. It also serves a therapeutic purpose in some cases. They give some roentgenograms of the knee thus insufflated.

Progrès Médical, Paris

Aug. 28, 1920, **35**, No. 35

*Grafts of Organs. P. Mauclaire.—p. 377. Conc'n.
Therapeutic Organization of the Fight Against Syphilis. Queyrat.—p. 379. Conc'n in No. 36, p. 391.
What the War Has Taught Psychiatry. H. Damaye.—p. 381.
Early Caries of Upper Incisors. A. Feil.—p. 382.
Mucilaginous Laxatives. G. Faroy.—p. 383.

Grafts of Organs.—In this conclusion of his long review of the whole field of grafts of living tissue, Mauclaire discusses what has been accomplished to date in transplanting the lining of mucomembranous passages and reconstructing mucomembranous cavities and organs, partial grafts of the nose, the ear, and of segments of limbs in man. He remarks as the final word that grafting of all the different organs has been attempted, and with encouraging results in many, but there are many interesting fields for grafting work still unstudied, ready for concerted action by physiologists and surgeons.

Revue Neurologique, Paris

June, 1920, **27**, No. 6

The Excitomotor Syndrome of Epidemic Encephalitis. P. Marie and G. Lévy.—p. 513.
The Pseudo-Tapia Syndrome in a Tabetic. A. de Castro.—p. 537.
Chronaxia and Action of Progressive Currents in Case of Acquired Myopathy. G. Bourguignon.—p. 540.
*Tertiary Syphilitic Encephalopathy. P. Beaussart.—p. 542.

Tertiary Syphilitic Encephalopathy.—Beaussart describes what he regards as a unique case, a man of nearly 44 with old syphilis developing a set of symptoms suggesting a lesion in the thalamus with hemianopsia, visual hallucinations, generalized and jacksonian epilepsy with unconsciousness. The symptoms suggested general paresis but their tertiary character became manifest during the six months before death. A widower at 40, he had married a gay young wife at 42, and she had left him after six months.

Schweizerische medizinische Wochenschrift, Basel

Sept. 16, 1920, **50**, No. 38

Gonococcus Infection in Men, Women and Little Girls. Dind.—p. 833
*Syphilis Refractory to Arsphenamin. W. Lutz.—p. 838.
*Chloral in Cardiovascular Disease. A. Glaus.—p. 841.
Physiologic Changes in the Leukocyte Count. M. Schenk.—p. 845.

Syphilis Refractory to Arsphenamin.—Lutz describes two cases in which no benefit from treatment was apparent. The syphilis progressed to a rapidly fatal termination with symptoms of leptomeningitis in one; in the other, the conditions improved, but the repeated recurrence of the lesions demonstrated that the infection had not been materially modified. He is inclined to attribute the failure of arsphenamin in these cases to an inability of the cells to utilize the arsenic presented to them in this form. Others infected from the same source as the second patient did not display this refractory course, which seems to exclude an arsenic-proof strain of spirochetes. The second patient after proving refractory to arsphenamin and neo-arsphenamin was apparently cured with silver arsphenamin, but the interval since has been short.

Chloral in Treatment of Cardiovascular Disease.—Glaus reports that chloral has proved in several years' experience a very useful means to combat insomnia in patients with heart or vascular disease, especially with high blood pressure. In such cases the ordinary sedatives—outside of opium—often fail to relieve. The sedative action of chloral is supplemented by its vasodilating and its diuretic action. Some of the patients have been taking it for years. The usual dose is between 1 and 2.5 gm. By the mouth, it is given dissolved in 20 gm. water with 10 gm. syrup of orange peel. When given over long periods, it is preferred to give it in a small water or starch enema (30 gm.). Ten case reports are given from Jaquet's private clinic to demonstrate the advantages of this treatment under medical supervision. The output of urine in some cases, which had been under 700 c.c. under digitalis and other drugs, ran up to 1,400 or 1,600 under the chloral. Even when the patients did not sleep sound all night under these small doses, they were tranquil and free from dyspnea. Moderate degrees of cardiac insufficiency with signs of stasis in the lungs and swelling of the liver do not deter from this treatment, but severe degrees of cardiac insufficiency contraindicate it, and it is to the exclusion of such cases that Glaus ascribes the lack of unfavorable experiences with this treatment.

Sept. 23, 1920, **50**, No. 39

Pregnancy Toxicoses. P. Hüssy.—p. 857. Conc'n in No. 41, p. 918.
*Biologic Action of Fluorescent Rays. C. Amsler.—p. 865.
Hematoma in Gastrocolic Ligament. E. Hagenbach.—p. 868.

Sept. 30, 1920, **50**, No. 40

The Health Resorts of Switzerland. G. A. Römer.—p. 881.
Dropsical Appendix with Diverticulum. N. Enderlin.—p. 888.
Psychology of Disturbances in Gait. J. Kollarits.—p. 890.
Treatment of Seborrhea of the Scalp. H. Merz.—p. 891.

The Biologic Action of Fluorescent Rays.—Amsler brings down to date his account of his research on the sensitizing action of fluorescent substances on the surviving frog heart. Neither hematoporphyrin alone nor eosin nor exposure to electric light of 16 to 200 candle power alone affected the surviving frog heart injuriously. But the combination of either sensitizer with the light disturbed atrioventricular transmission of the impulse while later the ventricle was affected; the sinus last. The vagus does not seem to be involved in the disturbance.

Policlinico, Rome

Aug. 23, 1920, **27**, No. 34

Illumination of the Throat by Transparency. G. Bilancioni.—p. 915.
Auscultation During Forcible Respiration. P. Tilli.—p. 918.
The 1919 Malaria Campaign in Istria. M. Gioseffi.—p. 920.
Auditory Neuritis in Meningitis. G. Milesi.—p. 924.
Laceration of Thorax from Bite of Lion; Recovery. T. Boidi.—p. 927.

Aug. 30, 1920, **27**, No. 35

*Dysphagia with Disease of the Aorta. A. Nicotra.—p. 947
*Sugar Content of the Blood. S. Silvestri.—p. 950.
Traumatic Aneurysm of Temporal Artery. N. Novaro.—p. 955.

The Roentgen-Ray Findings with Aortic Disease.—Nicotra refers to difficulty in swallowing when there is aortitis, and explains that the trouble is due more to a motor neurosis

than to direct compression of the esophagus as is generally assumed. The motor neurosis of pharynx and esophagus entail hypertonia and hypokinesia, the movements of swallowing thus becoming incoordinated, and entailing dysphagia suggesting stenosis. Treatment for syphilis may improve conditions in the aorta, and thus cure the dysphagia.

The Sugar Content of the Blood.—Silvestri reviews the literature of the last few years on this subject, the behavior of the blood sugar in various diseases and especially with endocrine upset, adding in conclusion that all the data presented need confirmation by further research before decisive conclusions can be drawn.

Crónica Médica, Lima

July, 1920, **37**, No. 685

*Mycosis of Pharynx and Larynx. A. Flores.—p. 225.
Inflammatory Tuberculosis. M. Arias Schreiber.—p. 234.
*Pathogenesis of Cancer. C. Champy and F. Coca.—p. 236.
Congenital Serous Cysts. C. Villarán.—p. 249.
Pelvic Intraligamentary Hydatid Cyst. M. C. Castañeda.—p. 252.

Mycosis of the Throat.—Flores reports three cases in children, one in a woman of 70, and one in a young man, in all of whom an ulcerating lesion in the throat was mistaken at first for syphilis or tuberculosis or other pathologic condition until the improvement and usually promptly permanent cure under iodid treatment corrected the diagnosis to mycosis. This was not suspected in any instance until the negative tuberculin and Wassermann tests, the absence of pathologic antecedents and the inefficacy of mercurial treatment gave the clue, after weeks had been wasted. The fungus seemed to be *Discomyces pulmonaris* in one of the cases.

Pathogenesis of Cancer.—Champy and Coca describe with ten illustrations a small pedunculated tumor in the uterine cervix the cells of which showed typical epithelioma in the distal portion while the proximal portion showed merely adenoma. They cultivated some of the adenoma cells in vitro and witnessed the development from them of typical epithelioma cells. The phenomena observed seem to confirm, they say, that the property of malignant growth is due to the loss of some inhibiting action on the cells rather than to any special stimulating action. An adenoma may well suffice to induce this inhibiting action, explaining the malignant degeneration of such growths.

August, 1920, **37**, No. 686

*Reaction to Tuberculin Tests in Blastomycosis. E. Escomel.—p. 257.
Acute Thyroiditis of Malarial Origin. F. Wieland.—p. 259.
Case of Myiasis under Skin of Scrotum. N. E. Cavassa.—p. 262.
Chronic Intestinal Stasis. E. Bello.—p. 264.

Positive Reaction to Tuberculin in Blastomycosis.—Escomel relates experiences and cites those of Lozada Benavente which prove that the skin and intradermal tuberculin tests elicit positive responses in persons with blastomycosis entirely free from tuberculosis. He urges application of tuberculin tests to patients with leishmaniasis.

Semana Médica, Buenos Aires

June 3, 1920, **27**, No. 23

*Opium in Acute Dilatation of the Heart. D. T. R. Davison.—p. 749.
Diseases of the Conjunctiva. R. Argañaraz.—p. 750.
Psychophysiology of the Aviator. XI. J. A. López.—p. 762.

Opium Treatment of Acute Dilatation of the Heart.—Davison extols the benefit from opium as he observed it in an old case of aortic insufficiency in which compensation was lost as consequence of unusual severe climbing exercise. After failure of all other measures, the heart beat 224 per minute, the condition rapidly returned to the former state under a single injection of an opium preparation.

June 17, 1920, **27**, No. 25

Multiple Echinococcus Cysts. G. Arrizabálaga.—p. 803.
Organized Fight Against Tuberculosis in Argentina. G. Aráoz Alfaro.—p. 811.
*Nerve Blocking for Dacryocystectomy. R. R. Gil.—p. 817.
*Potassium Iodid by the Vein. A. Bergman.—p. 822.
Preventive Medicine. J. A. López.—p. 825.
*Diagnostic Painful Point in Malaria. R. Pagniello.—p. 830.

Nerve Blocking for Dacryocystectomy.—Gil gives illustrations showing the Seidel method of blocking the nerve for removal of the lacrimal sac, and then illustrates his own improved technic for the purpose. Instead of injecting the anesthetic through the eyelid and also through the skin below the orbit, as in the Seidel technic, he makes the single injection in the conjunctival sac, after cocain, just above and beyond the lacrimal caruncle, introducing the needle for 2.5 cm., following the inner wall of the orbit to a point back of the bifurcation of the nasal-ciliary nerve.

Potassium Iodid by the Vein.—Bergman's experience confirms that when there is intolerance for this drug by the mouth, it can be injected intravenously without much effect on the blood pressure.

Diagnostic Painful Point with Malaria.—Pagniello has practiced for thirty years in a malarial zone in Italy, and he calls attention to a painful point on pressure of the ninth left intercostal space, between the median and the posterior axillary line. The patient winces when the finger presses this point. In exceptional cases the pain may be more pronounced in the interspace above or below. He declares that this is a constant and characteristic sign of malaria, and when it is found there is no need to examine the blood for the malarial parasite.

Tohoku Journal of Experimental Medicine, Sendai

July 17, 1920, **1**, No. 2

*Change of Constituents of Urine After Section of Renal Nerve.—R. Yoshimura.—p. 113.
*Autolysis of Normal Serum. H. S. Yamakawa and K. Okubo.—p. 120.
*Salt Glycosuria. K. Naito.—p. 131.
*Internal Secretion of the Pancreas. T. Kumagai and S. Osato.—p. 153.
*Action of Serum of Nephritics. T. Kato and M. Watanabe.—p. 167.
*Epinephrin Mydriasis with Chronic Nephritis. T. Kato and M. Watanabe.—p. 187.
*Results of Operative Treatment of Exophthalmic Goiter. S. Sekiguchi and H. Ohara.—p. 192.

The Urine After Section of Renal Nerve.—Yoshimura's research confirms that the change in the urine after the renal nerve has been severed is due to acceleration of the circulation from loss of the vasoconstricting influence of the renal nerve. The article is in English.

Autolysis of Normal Serum.—Yamakawa and Okubo report an activating influence from phenol, resorcin, brenzcatechuin and pyrogallic acid on the autolysis of normal serum. Addition of toluene promotes phenol activation and also acetone activation. Addition of normal serum to the serum activated by phenol, inactivates it completely even after the serum has been heated to 55 C. for thirty minutes, but a temperature of 60 C. or more annuls this property. (In German.)

Salt Glycosuria.—Naito's experiments on rabbits after both splanchnic nerves had been severed disprove the hypothesis that salt glycosuria is due to increased permeability of the kidneys. Also that protection against chilling will ward off salt hyperglycemia. However, salt glycosuria is checked by it to a large extent. Inhalation of air rich in oxygen does not modify the hyperglycemia or the drop in temperature after the subcutaneous injection of the solution of sodium chlorid or magnesium sulphate, while it had a marked influence in reducing the glycosuria. (In German.)

Internal Secretion of the Pancreas.—Kumagai and Osato report evidence which testifies that the pancreas hormone passes into the blood by way of the lymphatics. Lymph from the thoracic duct obtained after injection of pilocarpin had an antiglycosuric action on dogs with pancreas diabetes. (In German.)

Action of Serum from Nephritics on Sympathetic Nerves.—Kato and Watanabe conclude from their extensive research that the active principle in the serum in cases of chronic nephritis is entirely different from the vasoconstricting principle in normal serum, and different from epinephrin. It is destroyed by standing, by heating to 56 C. and by desiccation, but stands exposure to cold. It is insoluble in alcohol and ether, disappears from the serum when the albumin content has been removed and does not pass into the dialysate. (In German.)

Epinephrin Mydriasis with Chronic Nephritis.—Kato and Watanabe state that the mydriasis which follows instillation of four drops of a 1:1,000 solution of epinephrin in the eye

in the course of five minutes in cases of chronic nephritis seems to parallel the blood pressure. It is rarely positive with acute nephritis. They ascribe the action to the active principle in the serum with chronic nephritis mentioned in the preceding abstract.

Results of Operative Treatment for Exophthalmic Goiter.—Sekiguchi and Ohara tabulate the blood findings before and after operative treatment in ten cases, and after medical and roentgen-ray treatment in five others. The number of polymorphonuclear leukocytes increases while that of the lymphocytes drops, but this is observed likewise after other operations on the neck, and is usually transient. The blood pressure declines, usually more after thyroidectomy than after ligation of the vessels. The symptoms generally disappeared more or less completely after operative treatment, and the impaired nutrition recuperated. (In English.)

Deutsche medizinische Wochenschrift, Berlin

July 1, 1920, **46**, No. 27

New Remedies. A. Holste.—p. 729.
Attempts to Improve Roentgenotherapy. F. Gudzent.—p. 732.
*Scarlet Fever in Infants. G. Dorner.—p. 734.
*Vaccine Treatment of Colitis Ulcerosa. Korbsch and Gross.—p. 735.
Pain Tracts of the Vegetative Nervous System. V. Hoffmann.—p. 736.
*Splanchnic Nerve Anesthesia. Nölle.—p. 737.
*Delayed Healing of Fractures Due to War Diet. U. Hammer.—p. 738.
*Intracardiac Injections. K. Vogeler.—p. 740.
*Fracture of Navicular Bone of Foot. Golliner.—p. 740.
Staining Method for Tubercle Bacilli. Konrich.—p. 741.
Interstitial Emphysema in Influenza. F. Schotten.—p. 741.
*Physiology and Pathology of the Hypophysis. M. Jacoby.—p. 742.
Rhinolaryngologic Hints for the General Practitioner. Finder.—p. 743.

Scarlet Fever in Infants.—Dorner reports in detail three cases to show the results of allowing mothers suffering from scarlet fever to continue to nurse their infants. The first two infants remained well, presenting no fever and no desquamation. The third child showed, seven days after the appearance of the first symptoms in the mother, a slight rise of temperature (37.6 C.), which returned permanently to normal the day after. Reddening of the throat or on the body could not be discovered. The tongue remained clean. Four days later a beginning desquamation was noted on the hands, which became distinctly lamellar, and later extended to the feet. It lasted four weeks, longer than in the mother. There was also a slight swelling of the lymph glands of the neck. There was no otitis, no albuminuria, and there were no complications. Following the addition of Soxhlet sugar to the milk there was a transient diarrhea, but this disappeared when milk-sugar was substituted. The child was naturally weak and gained only slowly in weight. In general, therefore, Dorner says that infants, during the first few months, are either immune to scarlet fever or, if they do get it, it takes such a mild course that careful examination is required to establish the fact. Infants may, then, be left safely with the mother, and if her condition permits she may even continue to nurse her child.

Specific Treatment of Colitis Ulcerosa.—Korbsch and Gross report that, since chronic bacillary dysentery in the form of colitis ulcerosa is produced and kept up by a continual infection with dysentery bacilli, they have been able to effect a cure by intravenous vaccination. Forster, Gillet, Stephan, Newman, Shivdas, Löwenthal, Ditthorn, Boehncke, and others, have also reported excellent success from vaccination in chronic cases of dysentery.

Splanchnic Nerve Anesthesia.—Nölle relates his unfavorable experiences with the intraperitoneal blocking of the splanchnic nerve by the Braun method, as described in No. 4 of the current volume of the *Wochenschrift*. A half hour after the injection of 0.02 gm. of morphin and 0.0005 gm. of scopolamin, an exploratory laparotomy for suspected cancer of the stomach was performed on a man of 59. After opening the abdominal cavity under local anesthesia, 100 c.c. of a 0.5 per cent. solution of procain and 0.5 c.c. of epinephrin solution (1:1,000) were injected retroperitoneally, in front of the body of the vertebra, on a level with the xiphoid process. No changes were found in the gastro-intestinal tract. During the operation the patient lay in a light twilight slumber. As the stomach and the transverse colon were lifted up he emitted a few slight groans. After the operation he had no recollection of it. Four hours after the operation the patient regained full consciousness, but his face took on an anxious, pained expression. The abdomen was distended. At a slight touch spasmodic jerks of the whole abdominal musculature occurred. A jerk could be noted every few minutes. Adjusting of the bedclothes or turning on the electric light elicited a jerk. The muscles of mastication and the muscles of the neck were not involved. A heavy sweat broke out on the face. The syndrome resembled that of tetanus. As a precaution antitetanic serum was injected in large doses subcutaneously and intravenously. The condition of increased reflex excitability lasted for two or three days. Various theories in explanation of the phenomena are discussed, but no definite conclusion could be reached.

Delayed Healing of Fractures Due to War Diet.—Hammer reports a series of fractures in which eight cases (28 per cent.) gave evidence of delayed healing apparently from lack of material to form callus. Various therapeutic measures were tried, none of which were unequivocally successful. Especially the administration of calcium and phosphorus proved of doubtful value. Often the only effect of the calcium preparations was to bring on an unusually refractory constipation. Hammer takes the poor effect of the calcium and phosphorus preparations as an indication that the bone affections were not due solely to the lack of these substances in the war diet—at least not directly—but that complicated metabolic processes were involved, in which the endocrine glands probably played a prominent part. Physicotherapy seemed to exert a more favorable influence than direct medication. Massage and, especially, hot air jets seemed to exert a decisive effect in some of the severe cases.

Intracardiac Injections.—Vogeler tells his experience with intracardiac injections of epinephrin in total collapse. Following an operation for appendicitis on a boy of 14, occlusion of the ileum occurred. During the operation thus necessitated the patient collapsed. The pulse ceased entirely and breathing stopped. The operation was hurriedly brought to a close, and stimulation of heart activity by caffein and heart massage was attempted. The pulse recovered for a short interval but again vanished; breathing was not restored, and the pupils became dilated. An intravenous injection was not possible, for the veins could not be reached. No heart tones could be heard with the stethoscope. Vogeler hereupon injected 1 c.c. of epinephrin (1:1,000 solution) directly into the heart, and the effect was astonishing. After about half a minute the pupils began to contract, the pulse could be felt, and at about the same time respiration was slowly begun. The patient regained consciousness, whispered first inaudibly, and then said to the nurse: "Now I am getting better." Further injections of caffein were given; also a subcutaneous infusion of sodium chlorid in the thighs. In six minutes the pulse again became imperceptible, breathing ceased and the pupils became dilated. A second injection of epinephrin revived the child in the same manner as the first injection, but in two minutes he sank back and died. There are a number of recorded cases in which injections of epinephrin into the heart have been made, for example, those of Szubinsky, Ruediger, Esch, Dörner, Latzko and Volkmann, usually with at least a temporary effect. There is one case of record in which Zuntz injected epinephrin into the heart of a woman suffering from operative shock and succeeded in thus saving his patient. Vogeler adds that intracardiac injections constitute the strongest and the most immediately effective method of heart stimulation known, and therefore deserve most serious consideration, not only with respect to their employment at the bedside of the patient but also as regards their further experimental development.

Fracture of the Navicular Bone of the Foot.—Golliner reports the rare instance of a patient (a railway employee) fracturing the navicular bone of the foot by "turning" his ankle when walking along a hard, level but unpaved road. Fractures of this bone seem to be rare and one authority (Hueter) states that they occur only by direct force from without. Massage, packs and flatfoot inlay caused the subjective symptoms to recede but slowly.

Physiology and Pathology of the Hypophysis.—Jacoby recalls that embryologically the anterior lobe and the pars intermedia of the pituitary, being derived from the buccal cavity, are to be distinguished from the posterior lobe, which is developed from the embryonic brain. Whereas the anterior lobe can be fairly well detached by operation from the balance of the gland it is not possible to separate distinctly the pars intermedia from the posterior lobe so that any conclusions in regard to the share that the two portions have in the functions of the organ must be reached indirectly. Only the anterior lobe and the pars intermedia can be regarded with certainty as endocrine glands whose secretions are indispensable for the activities of the other organs of the body. It seems that the other endocrine glands can function normally only so long as the hypophysis contributes its part to the work of the whole which agrees with the common experience that the glands of internal secretion stand in an innermost relationship to each other. Jacoby discusses the various theories that have been proposed in explanation of the various functions or supposed functions of the anterior lobe, the pars intermedia and the posterior lobe. Diuresis seems to be checked by the posterior lobe and promoted by the anterior lobe. The mode of functioning may be by nerve stimulation.

Münchener medizinische Wochenschrift, Munich

July 30, 1920, **67**, No. 31

*Significance of Stalagmons. H. Bechhold and L. Reiner.—p. 891.
Industrial Myopia. R. Schneider.—p. 892.
*Serum for the Treatment of Chancroid. J. Reenstierna.—p. 895.
*Albee Operation in Tuberculosis of the Spine. Görres.—p. 896.
*Blood Transfusion in Gynecologic Cases. R. Zimmermann.—p. 898.
Industrial Melanosis: Dry Batteries. A. Arnstein.—p. 902.
Etiology of Actinomycosis of the Tongue. C. Harms.—p. 903.
Nerve Blocking for Goiter Operations. W. Förster.—p. 904.
Pathologic Reaction to First Injection of Antitoxin. Busch.—p. 905.
Traumatic Nephritis. H. Sieben.—p. 905.
Arsphenamin Prophylaxis in Syphilis. A. Brun.—p. 906.
"Therapeutic Effects of Pneumoperitoneum." O. David.—p. 907.
Instruction in Physical Culture at Universities. Riesser.—p. 908.

The Surface Tension of Body Fluids.—Bechhold and Reiner recall that in certain diseases the surface tension of the urine is much below normal. To the substances that lower the surface tension they have assigned the term "stalagmons." They find that they belong to the colloids or semicolloids; that they are more finely dispersed than albuminous substances; that they are stable under variations in temperature; that they are slightly acid or amphoteric, and are easily soluble in water. As belonging to the stalagmons they found, especially, albumin decomposition products, such as oxyproteic acids, albumoses and peptones; in certain diseases also albuminous substances and elements of the bile. Determination of the "stalagmometric quotient" may have theoretic and practical value in infectious diseases. They are convinced that the increased sedimentation of the red corpuscles in blood plasma, as found by Fåhræus and Plaut in certain diseases, is effected by stalagmons.

A Serum for the Treatment of Chancroid.—Reenstierna prepares an antistreptobacillus serum by injecting intravenously increasing doses of killed and living streptobacillus cultures into large rams over a protracted period. Laboratory experiments to determine the immunizing qualities of the serum have not been performed as yet for lack of animals for experimentation, but the serum has been tried out therapeutically in about 100 cases of chancroidal buboes. In most cases chancroids were also present. When it had been shown by the first trials that the antistreptobacillus serum alone exerted a distinct effect on the process produced by the corresponding virus, Reenstierna decided to use a preparation consisting of a serum that was mixed with a definite quantity of killed febrifacient bacteria; for example, typhoid bacilli. With this preparation all cases of unopened chancroidal buboes except seven were cured in an unusually short time, in a little over a week, on the average. As for the seven apparent exceptions, cultures of pus derived by puncture showed staphylococci. The negative effect of the preparation in these seven cases points, therefore, to a specific effect of the serum on the chancroid bacillus. Chills and high fever; considerable sensitiveness, lasting several days, at the site of the injection (gluteal musculature), and occasionally transient sensitiveness in regional, inguinal lymph glands, are the untoward effects of this serum treatment.

The Albee Operation in Tuberculosis of the Spine.—Görres reports cases of spondylitis in which the Albee operation was performed between 1913 and 1918. Of the 35 reexamined personally, one patient still presented a fistula six years after the operation; the other 34 had been cured. They were free from pain; children were attending school and taking part in gymnastic exercises, while adults were able to perform the duties of their respective callings. Five of the cases reexamined had been abscess cases. The abscess had healed a short time after the operation and had not reappeared. In no case was there any considerable disturbance of the motions of the spinal column caused by the bone-graft. The portion of the spine that was bridged over was rigid, but the balance of the spine was more flexible. Görres, therefore, regards the Albee operation as a simple, almost harmless, form of intervention that brings numerous advantages without giving rise to later disturbances. He thinks it is indicated in almost all cases of tuberculosis of the spine.

Blood Transfusion and Reinfusion in the Severe Acute Anemia of Gynecologic Cases.—Zimmermann gives several case reports and concludes from the unfavorable outcome in certain instances that indirect blood transfusion by the sodium citrate method is not so free from danger as the accounts in the literature of recent date would have us believe, for which reason he does not intend to employ the method in the future. Intravenous reinjection of the extravasated blood in ruptured tubal pregnancy seemed to exert a favorable influence in one case, but the results were not absolutely convincing. In future he expects to resort to blood reinfusion only in case the pulse fails to improve following the operation. Here he thinks blood reinfusion has its chief indication and may have great value.

Therapeutische Halbmonatshefte, Berlin

July 1, 1920, **34**, No. 13

Pathogenesis and Treatment of Anemia. S. Isaac.—p. 341. Cont'd.
*Operative Treatment of Diffuse Colitis. R. v. Lippmann.—p. 346.
Artificial Heliotherapy in Lung Tuberculosis. Traugott.—p. 350.

Indications for Operative Treatment of Colitis.—Lippmann says that surgical treatment of acute, diffuse colitis and acute dysentery is indicated only in case of complication with peritonitis. In protracted dysentery and colitis suppurativa, surgical intervention should be confined to such cases as assume a distinctly chronic form. In chronic cases, provided dieting, medication and medicated enemas do not bring improvement, operative treatment may be resorted to if the patient is in relatively good condition—not markedly emaciated or anemic, and no edema.

Wiener klinische Wochenschrift, Vienna

Aug. 12, 1920, **33**, No. 33

Radium Therapy in Internal Medicine. Falta and Högler.—p. 723.
Studies on the Effects of Nuclein. IV. P. Habetin.—p. 726.
*Deglutition Symptoms in Intestinal Conditions. T. Bársony.—p. 729.
Bacillus Crassus (Lipschütz). E. Löwi.—p. 730.
Otosclerosis and Tetany. H. Frey and K. Orzechowski.—p. 734. Cont'n.

Distended Intestine Impeding Swallowing.—Bársony reports two analogous cases, in one of which, apparently, intestinal paralysis, that had followed an enteritis, had occasioned a dilatation of the colon, which, in turn, impeded the passage of the food into the stomach from compression of the esophagus below the diaphragm. Following a course of treatment at Carlsbad the dilatation of the colon was relieved and the deglutition symptoms disappeared. Bársony is convinced that a certain proportion of deglutition symptoms treated as of nervous origin come, in reality, under the head of pressure phenomena produced by stretched and distended loops of intestine.

Zeitschrift für Kinderheilkunde, Berlin

Aug. 16, 1920, **26**, No. 3-4

*Bacteria of the Normal Skin in Children. F. Loebenstein.—p. 99.
*Varicella. M. Stroh.—p. 120.
*Mode of Contagion of Scarlet Fever. E. Kobrak.—p. 137.
Wartime Diet and Lactation. Klotz.—p. 150.

*Repeated Attacks of Measles. B. Lewy.—p. 160.
*Importance of Initial Breast Feeding. H. Langer.—p. 163.
Tuberculosis Among Berlin Children. H. Davidsohn.—p. 178.
*Hemorrhagic Kidney Infarcts in Children. F. Oppenheim.—p. 192.

Bacteria of Normal Skin in Infants.—Loebenstein examined infants less than 6 months old at two institutions and found so few bacteria that the normal skin can be regarded as almost free from bacteria.

Blood Findings, etc., in Chickenpox.—The incubation time in the few of the 234 cases of varicella at the children's clinic at Frankfort in which the incubation could be traced, was thirteen or fourteen days. An enanthema in the mouth was noted only in twenty-nine cases. Severe gangrene developed in two children with coincident scarlet fever. In one case the varicella ran a hemorrhagic course with internal bleeding but final recovery. Nephritis developed in three of the 234 cases. The tabulated blood findings from various clinics are conflicting. As a rule, however, a reduction in the numbers of leukocytes at the height of the disease testifies in favor of varicella, while an increase points to variola.

Contagion of Scarlet Fever.—Kobrak's investigations in 87 cases of scarlet fever confirmed the importance of direct transmission of the disease from the sick to the well, and mainly by the nasopharyngeal secretions, not by fomites. The disease was frequently brought into a family by some outsider before the scarlet fever in the outsider had been recognized. The walking light cases are the principal source of infection. In the 50 families investigated with 227 members, the father who kept away from the sick member and the maids that took care of the room but who did not come into direct contact with the scarlet fever patient never contracted the disease. This testifies against transmission by food, stools or urine, and by healthy third parties. Contagion occurred more frequently in the well-to-do families with spacious homes, than in unhygienic conditions. This seems to confirm the dictum that overfed children—who as a rule are more inclined to throat infections—contract scarlet fever more readily than the undernourished. The comparative infrequency of contagion in the crowded homes of the poor speaks further against scales as the main carriers of contagion. The disease spread to 28 per cent. of the other members in 13 wealthy families; in 18 per cent. of 40 families with moderate nourishment, and in 0 per cent. of 4 undernourished families. In 9 overfed families, 75 per cent. of the other children were infected; in 42 with moderate nourishment, 48 per cent., and in the 4 undernourished families 0 per cent. The influence of overfeeding on the incidence of scarlet fever is shown in an inverse manner by the decline in the number of cases of scarlet fever as a whole during the war undernourishment period. In 1911 there were 6,772 cases recorded in Berlin and in 1918 and 1919 only 1,962 and 1,622. Diphtheria and measles have not shown any similar decline. It is possible that early enlargement of the spleen and liver during the incubation period may reveal impending scarlet fever.

Repeated Attacks of Measles.—Lewy's attention was attracted to this subject by the fact that his own child had two typical attacks of measles with an interval of three years. He has a record of 46 families in which there were 71 cases of measles and the incubation period could be determined with precision. It was ten days in 15; nine and eleven days in 12 each; eight in 10; seven in 5; twelve and thirteen in 5 each; six in 2, and from the fourteenth to the nineteenth day in one case each.

Importance of Initial Breast Feeding.—Langer's extensive research has demonstrated that in children getting breast milk strains of colon bacilli develop which have only slight proliferating power, while with artificial feeding strains with extreme proliferating power are found. The presence of these strains is an important factor in the development of dyspepsia. The importance of these feebly proliferating colon bacilli as the physiologic intestinal flora is restricted to the first months of life; after this the intestines seem to become immunized so that they do not develop dyspepsia from insignificant causes as before. The stronger colon bacilli are found in older infants and children as the physiologic intestinal flora. He gives the details of fifty-five cases with the colon bacillus index in each. This is determined by inoculating a set of bouillon typhoid cultures with the colon bacilli and transferring a loop to an Endo plate. The strains of the colon bacilli are classified according to the number of typhoid bacilli cultures which they allow to develop.

Hemorrhagic Kidney Infarcts in Infants.—Oppenheim discusses the pathogenesis and the etiology of total hemorrhagic infarction of the kidney in infants, and describes three cases in detail. There had been severe diarrhea in each case, actual dysentery in one child. Thrombosis of numerous glomerulus coils was manifest, but none of the larger renal vessels showed thrombosis. He ascribes the whole to toxic injury of the walls of the capillaries in the medullary substance of the kidney. The injured walls of the capillaries allowed extravasation of blood. The thrombosis was of the hyaline type, which testifies to toxic action. Infarction of the kidney must be more common in infants than generally recognized; Beckmann encountered ten cases in a recent nine months, Pollak twelve, and Oppenheim these three cases among 150 infant cadavers in two years. As a general thing, however, this infarction leads to inflammation, and the cases do not come to necropsy before the inflammatory stage has been reached. In conclusion he comments on the analogy between this toxic infarction of the kidneys with the purpura of the brain from arsphenamin poisoning to which attention has been called recently under the heading "Thrombosis of the Vena Magna Galeni Responsible for Salvarsan Fatalities." Oppenheim has had two salvarsan fatalities from hemorrhagic purpura but there was no thrombosis in the venae galeni. In arsphenamin poisoning, the relations between hemorrhagic purpura of the brain and hemorrhagic encephalitis are probably the same as between the hemorrhagic infarction and hemorrhagic glomerular nephritis in his cases in infants. One of the infants showed incipient glomerular nephritis.

Zentralblatt für Chirurgie, Leipzig

July 31, 1920, **47**, No. 31

Osteoarthritis Deformans Juvenilis Coxae, Osteochondritis Deformans or Coxa Plana? P. Frangenheim.—p. 946.
Apparatus for Estimating Scoliosis, etc. A. Brüning.—p. 948.
*Ligation of Four Thyroid Arteries. M. Madlener.—p. 949.
*Note on Operation for Harelip. H. Stettiner.—p. 952.

Tetany After Ligation of the Four Thyroid Arteries in Goiter Operation.—Madlener states that a number of surgeons of late have been ligating all four thyroid arteries, and, to judge from reports to date, without causing injury. During a seventeen-month period, Madlener performed 169 goiter operations, twenty-nine unilateral and 140 bilateral. In thirty-eight cases only three arteries were ligated, either because one artery was not fully developed or could not be located. In ninety-three cases the preliminary ligation of all four arteries was done. As a rule, an extensive resection was made on the side chiefly affected, a remnant from the size of a walnut up to that of a hen's egg being left. Less frequently a whole lobe was enucleated. The posterior portions of the goiter capsule were molested as little as possible. The recurrent nerve was never exposed. The isthmus was always removed. The results in the ninety-three patients so treated were, in the main, favorable. But in the spring of 1920 he operated on an apparently strong man of 38 with a bilateral goiter somewhat larger than one's fist, causing pressure symptoms. The four (very large) thyroid arteries were ligated and the right lobe was resected down to the size of a walnut, and the left lobe to a remnant half the size of a fist. Suppuration set in; for several days there was moderate fever. On the twenty-first day following the operation the patient was dismissed with a suppurating fistula but with no other bad symptoms. On the third day following, severe typical tetany developed, to which the patient succumbed six days later. The parathyroid glands could not have been removed or injured during the operation. The amount of thyroid substance left was greater than in many other cases that progressed favorably. Madlener thinks the ligation of the four arteries was responsible for the fatal result, all the more so since the first symptoms of tetany did not appear until the twenty-fourth day. Owing to the insufficient blood supply, the parathyroids could continue to function only a limited time and finally became necrotic. He now keeps within the bounds

of safety in bilateral resections by ligating, as in earlier years, only three arteries or, at the most, three and a portion of the fourth.

Harelip.—Stettiner opposes Drachter's view that in bilateral harelip the same operative method should be used as in the unilateral form, and that from six to eight weeks after the operation on one side the second operation on the other side should be done. Stettiner emphasizes that in all cases in which the middle portion of the lip between the clefts is too small—which is usually the case—skin tissue from either side must be taken to widen the lip. He doubts whether Drachter's method will give a good cosmetic result. He thinks the Hagedorn procedure is here the method of choice—possibly with slight modifications. If the incisive bone protrudes it should be set back by subperiosteal division of the vomer, as recommended by Bardeleben. As to the time for operating on harelip, that depends mainly on the general condition of the child. If the general condition is good, Stettiner has found the first week after birth, and more especially the fifth day, to be opportune. One big advantage of early operation is that the members of the family are relieved of the thought of the child having a deformity. However, it is possible to wait until the third or fourth month provided other indications such as cleft palate, malnutrition, tendency to bronchitis and bronchopneumonia, etc., do not demand earlier intervention.

Zentralblatt für Gewerbehygiene, etc., Berlin

June, 1920, **8**, No. 6

Prevention of Accidents with Circular Saws. A. Preuss.—p. 97.
*Occupational Poisoning with Hydrocyanic Acid. F. Koelsch.—p. 101. Begun in No. 5, p. 93.
*Recognition and Treatment of Bladder Tumors in Dye Workers. R. Oppenheimer.—p. 105.
The Female Factory Inspector. W. Pryll.—p. 107.

Occupational Poisoning with Hydrocyanic Acid.—Koelsch has found that workmen can stand for years the inhalation of minute amounts of hydrocyanic acid in the form of gas, up to 0.02 mg. per liter of air, without apparent harm. Some of the workmen had been in the occupation specified for fifteen years. The German government recently prohibited the use of hydrocyanic acid for extermination of vermin except in military circles and in scientific institutions, but since then has given a commercial company the monopoly for this form of extermination of vermin. Treatment must include inhalation of oxygen and artificial respiration, injection of epinephrin or possibly of atropin, with stimulants, etc., but in mild cases symptomatic treatment alone is all that is needed. As some of the hydrocyanic acid is eliminated through the stomach mucosa, lavage of the stomach may prove useful, possibly with hydrogen dioxid. Sulphur compounds may aid, such as subcutaneous injection of a 5 per cent. solution of sodium thiosulphate. This will yield up its sulphur and aid nature's efforts.

Bladder Tumors in Dye Workers.—Oppenheimer emphasizes the necessity for examining the urine of workers in synthetic chemicals for red corpuscles several times a year, and in all suspicious cases the cystoscope should be used at once. After operative or intravesical treatment of a bladder tumor in a dye worker, he should return for cystoscopic reexamination every three months at least.

Zentralblatt für innere Medizin, Leipzig

July 31, 1920, **41**, No. 31

Does the Recognition of Roentgenology as a Distinct Branch of Medical Instruction Exert a Harmful Effect on Clinical Subjects? O. David.—p. 537.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Sept. 4, 1920, **2**, No. 10

*Marriage and Cancer. H. T. Deelman.—p. 867.
Apparatus for Quantitative Determination of Small Urea Content of the Blood, etc. A. J. L. Terwen.—p. 875.
Outcome of Sanatorium Treatment of Weakly Children. G. J. Huët.—p. 880.
*Trigeminal Neuralgia. J. E. Schulte.—p. 883.
Cooperation Between Family Physician and Sanatorium Physicians. C. J. Brenkman.—p. 889.
The Milk Supply of Amsterdam. E. J. Abrahams.—p. 894.

Marriage and Cancer.—The records of Treub's service at Amsterdam show that in 601 cases of uterine cancer between 1896 and 1918, the average age was higher with cancer of the body of the uterus (61 years) than with cancer of the projecting portion of the cervix (49 years). There were thirty unmarried women to 571 married in the list. The proportion of unmarried to married women in the general population as a whole averages 120 to 480. Among the forty-eight women with cancer of the body of the uterus, 31 per cent. were unmarried and the average number of children per woman was 2.8 per cent. Among the 553 cervix cases there were only 5.2 per cent. unmarried and the average number of children per woman was 5. There were thus six times as many nulliparas among the corpus cancer cases as among the cervix cases, Göbel's statistics showed similar proportions: 33.9 per cent. nulliparas and 2.9 per cent. children among the corpus cancer cases, and 4.8 per cent. and 5.02 in the cervix cases, respectively. Fast found only 2.5 per cent. nulliparas in his 812 portio cancer cases, but 21 per cent. nulliparas in twenty-eight cancers of the body of the uterus. Deelman's impression is further that the unmarried develop fibromas in the uterus more frequently than the married, and that the chance for a sterile marriage is increased by a fibroma. Treub ascribes the predominance of cancer of the body of the uterus in nulliparas to the lack of the extensive "housecleaning" of the uterus which a pregnancy and childbirth represent.

The statistics of the city of Amsterdam show 153 bachelors to 2,134 married men who died from cancer of the stomach or liver, and 293 unmarried to 1,923 married women. With mammary cancer, 102 unmarried to 428 married women, and with cancer of the uterus, 106 unmarried to 987 married. Cancer of the digestive tract thus occurs in 25 per cent. more among the married than among the unmarried of both sexes, calculated according to the proportion of each in the population at large. With uterine cancer, the married show 100 per cent. more than the unmarried. The number of children does not seem to have any influence on the incidence of cancer of the cervix, only the fact whether there has been childbirth or not. (This article has been recently published in French in *Gynécologie et Obstétrique* **1**:493, 1920.)

Trigeminal Neuralgia.—Schulte reviews the recent literature on treatment of what the ancient Arabian physicians described as tortura oris, and concludes by commending roentgen irradiation as legitimate after failure of internal measures and electricity. If this fails likewise, then injection of alcohol; this can be repeated but not continued too long, with an operation on the nerve as the last resource.

Hospitalstidende, Copenhagen

Aug. 25, 1920, **63**, No. 34

*Radiology in Sweden. E. Collin.—p. 521.

Radiotherapy in Sweden.—Collin says that the history of radiotherapy in Sweden is the history of one man, Prof. G. Forssel, of the chair of medical radiology at Stockholm. Since 1911, when the Radium Home was founded, the annual number of applicants for treatment has increased from 332 to 1,541. The results with inoperable cancer, he says, have been such that they "not only justify further research but they make the application and development of radium treatment of cancer a bounden duty." Collin's review of the technic and results concludes with the statement that what has been accomplished there with radium is far ahead of what has been realized in Denmark, while the achievements with roentgen irradiation are about the same in the two countries, but Denmark is far ahead in the matter of light treatment. Forssel insists that no one man can master both roentgen diagnosis and roentgen treatment. He reports 28 per cent. of the cases of uterine cancer cured after a five year interval; the surgeons count only on 18 per cent. cured of the operable cases after the same interval. The cancers treated included 94 per cent. inoperable cases.

Correction: Ether in Whooping Cough.—In the abstract with this title on p. 1234, the dose of ether is stated too small. It should be 1 or 2 c.c. of ether at two-day intervals.